

NEW SOUTH WALES.

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VOTES

AND

PROCEEDINGS

OF

THE LEGISLATIVE ASSEMBLY,

DURING THE SESSION

OF

**1856-7.**

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

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IN THREE VOLUMES.

VOL. III.

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(Arranged as the Papers should be bound.)

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OF THE

SESSION OF 1856-7,

AND TO THE

PAPERS ORDERED TO BE PRINTED DURING THE SESSION.

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Public .....	50, 195	3	656	
(See also "Permanent Public Works," "Sydney Sewerage Works," "Railway," "Water Works," and "Public Works Loan Bill.")				
Wright, Mr. Gilbert .....	581			
Writs of Trial and Inquiry Bill .....	203, 233, 245, 251, 290, 372, 434			
Wynter, Mrs. Elizabeth .....	501			





## No. 2.

## NEW SOUTH WALES.

RETURN of the Quantities of SPIRITS of every description upon which Duties have been paid into the Colonial Treasury of New South Wales, from 1st January, 1836, to 31st December, 1855.

YEAR.	IMPORTED SPIRITS.		SPIRITS DISTILLED IN THE COLONY.		TOTALS.	
	No. of Gallons.	Amount of Duty.	No. of Gallons.	Amount of Duty.	No. of Gallons.	Amount of Duty.
		£ s. d.		£ s. d.		£ s. d.
1836	305,452	126,257 14 5	5,334	800 2 0	310,786	127,057 16 5
1837	312,483	130,039 2 3	8,577	1,286 11 0	321,060	131,325 13 3
1838	260,712	110,512 16 2	18,090	2,755 2 6	278,802	113,267 18 8
1839	255,213	112,459 15 1	60,579	13,630 10 0	315,792	126,090 5 1
1840	288,152	131,285 10 1	53,499	13,053 14 6	341,651	144,339 4 7
1841	262,760	137,296 16 0	21,354	6,940 1 0	284,114	144,236 17 0
1842	258,610	135,494 14 3	18,723	6,934 4 6	277,333	142,428 18 9
1843	153,281	80,297 10 2	38,982	17,542 1 6	192,263	97,839 11 8
1844	136,658	71,458 9 8	32,659	14,696 11 0	169,317	86,155 0 8
1845	144,670	64,354 13 10	50,094	17,929 2 0	194,764	82,283 15 10
1846	236,235	53,790 15 8	78,046	13,658 1 0	314,281	67,448 16 8
1847	258,154	58,705 6 1	80,525	14,091 17 6	338,679	72,797 3 7
1848	282,069	63,909 0 3	52,753	9,231 15 6	334,822	73,140 15 9
1849	331,174	73,503 2 9	24,899	4,357 6 6	356,073	77,860 9 3
1850	386,248	84,610 19 2	16,286	2,850 1 0	402,534	87,461 0 2
1851	454,887	99,912 4 1	41,200	7,210 0 0	496,087	107,122 4 1
1852	616,580	138,636 9 1	97,419	18,211 0 0	713,999	156,847 9 1
1853	807,316	194,750 9 6	156,844	28,754 11 0	964,160	223,505 0 6
1854	903,719	234,899 15 0	188,428	35,550 8 8	1,092,147	270,450 3 8
1855	681,527	259,021 14 10	175,330	51,616 3 6	856,857	310,637 18 4
	7,335,900	2,361,196 18 4	1,219,621	281,099 4 8	8,555,521	2,642,296 3 0

Audit Office, Sydney,  
10th March, 1856.

JOHN STIRLING.

## No. 3.

RETURN shewing the Population, and the number of Gallons of Imported and Colonial Spirits upon which Duty has been received at the Colonial Treasury, also the average rate of Consumption by each Individual in each Year.

YEAR.	POPULATION.	NO. OF GALLONS.	AVERAGE RATE OF CONSUMPTION BY EACH INDIVIDUAL.
			<i>Gallons.</i>
1836	77,096	310,786	4·031
1837	85,267	321,060	3·765
1838	97,912	278,802	2·847
1839	114,386	315,792	2·760
1840	129,463	341,651	2·638
1841	149,669	284,114	1·898
1842	159,889	277,333	1·734
1843	165,541	192,263	1·161
1844	173,337	169,317	0·976
1845	181,556	194,764	1·072
1846	196,704	314,281	1·597
1847	205,009	338,679	1·652
1848	220,474	334,822	1·518
1849	246,299	356,073	1·445
1850	265,503	402,534	1·516
1851	197,168	496,087	2·516
1852	208,254	713,999	3·428
1853	231,088	964,160	4·172
1854	251,315	1,092,147	4·345
1855	277,579	856,857	3·086

AUDIT OFFICE, SYDNEY, }  
10th March, 1856. }

JOHN STIRLING.

## No. 4.

RETURN of the QUANTITY of SPIRITS DISTILLED in the Colony of New South Wales, upon which DUTY has been paid into the COLONIAL TREASURY, for the period from 1st January, 1836, to 31st December, 1855, showing the Rates and Amount of Duty in each Year.

YEAR.	PERIOD.	SPIRITS DISTILLED AT THE BRISBANE DISTILLERY.					SPIRITS DISTILLED AT THE GLENMORE DISTILLERY.					TOTALS.		
		Distilled from Grain.	Rate of Duty.	Distilled from Sugar.	Rate of Duty.	Amount of Duty.	Distilled from Grain.	Rate of Duty.	Distilled from Sugar.	Rate of Duty.	Amount of Duty.	Distilled from Grain.	Distilled from Sugar.	Amount of Duty.
		Gallons.	s. d.	Gallons.	s. d.	£ s. d.	Gallons.	s. d.	Gallons.	s. d.	£ s. d.	Gallons.	Gallons.	£ s. d.
1836	1 Jan., 31 Dec. ..	5,334	3 0	....	....	800 2 0	....	....	....	....	5,334	....	800 2 0	
1837	" " ..	4,627	"	....	....	694 1 0	3,950	3 0	....	592 10 0	8,577	....	1,286 11 0	
1838	" " ..	9,791	"	....	....	1,468 13 0	7,744	"	555	4 6	17,535	555	2,755 2 6	
1839	" " ..	....	....	36,735	4 6	8,265 7 6	....	....	23,844	"	5,365 2 6	60,579	13,630 10 0	
1840	1 Jan., 31 Oct. ..	7,859	5 0	19,468	"	6,345 1 0	4,607	5 0	14,517	"	4,418 1 6	19,514	33,985	13,063 14 6
	1 Nov., 31 Dec. ..	5,388	6 6	....	....	1,751 2 0	1,660	6 6	....	....	539 10 0			
1841	1 Jan., 31 Dec. ..	10,125	"	....	....	3,290 12 6	11,229	"	....	....	3,649 8 6	21,354	....	6,940 1 0
1842	1 Jan., 31 Mar. ..	7,612	"	....	....	2,473 18 0	4,285	"	....	....	1,392 12 6	18,723	....	6,938 4 6
	1 April, 31 Dec. ..	5,562	9 0	....	....	2,502 18 0	1,264	9 0	....	....	568 16 0			
1843	1 Jan., 31 Dec. ..	....	....	13,220	0 0	6,949 0 0	....	....	21,019	9 0	9,458 11 0	....	34,239	15,407 11 0
1844	" " ..	....	....	14,901	"	6,705 9 0	....	....	17,759	"	7,991 11 0	....	32,660	14,097 0 0
1845	1 Jan., 7 Nov. ....	....	....	20,320	....	9,144 0 0	....	....	12,972	....	6,837 8 0	50,136	....	17,929 2 0
	8 Nov., 31 Dec. ..	....	....	9,193	3 6	1,608 15 6	....	....	7,651	3 6	1,338 18 6			
1846	1 Jan., 31 Dec. ..	....	....	65,718	"	11,500 13 0	....	....	10,911	"	1,909 8 6	....	76,629	13,410 1 6
1847	" " ..	....	....	58,986	"	10,322 11 0	....	....	6,526	"	1,142 1 0	....	65,512	11,464 12 0
1848	" " ..	....	....	9,527	"	1,667 4 6	....	....	....	....	....	....	9,527	1,667 4 6
1849	" " ..	....	....	2,248	"	393 8 0	....	....	....	....	....	....	4,592	803 12 0
1850	" " ..	....	....	....	....	....	....	....	2,344	3 6	410 4 0	....	15,463	2,706 0 6
1851	" " ..	....	....	1,133	3 6	198 5 6	....	....	15,463	"	2,706 0 6	....	40,609	7,106 11 6
1852	1 Jan., 19 Aug. ....	....	....	6,415	....	1,122 12 6	....	....	39,476	"	6,908 6 0	97,818	....	17,529 13 4
	20 Aug., 31 Dec. ..	....	....	26,563	3 8	4,835 9 4	....	....	34,217	"	5,987 19 6			
1853	1 Jan., 31 Dec. ..	....	....	82,237	"	15,076 15 8	....	....	30,623	3 8	5,583 12 0	....	154,739	28,368 16 4
1854	1 Jan., 9 Nov. ....	....	....	104,377	....	19,135 15 8	....	....	72,502	"	13,292 0 8	183,129	....	34,464 7 0
	10 Nov., 31 Dec. ..	....	....	13,457	5 8	2,583 8 4	....	....	55,110	"	10,103 10 0			
1855	1 Jan., 11 Sept. ..	....	....	96,433	"	27,322 13 8	....	....	10,185	5 8	2,641 13 0	158,894	....	46,503 19 1
	12 Sept., 31 Dec. ..	....	....	44,058	6 5	13,953 3 6	....	....	17,721	6 5	5,020 19 0			
		56,293		624,089		159,111 0 2	34,739		394,077		98,351 16 1	91,037	1,019,066	257,462 16 3

Audit Office, Sydney,  
10th March, 1856

JOHN STIRLING.

1856.

NEW SOUTH WALES.

**CUSTOMS DUES.**

(MORPETH AND NEWCASTLE.)

*Ordered by the Legislative Assembly to be Printed, 20 August, 1856.*

RETURN to an *Order* dated 15 August, 1856, respecting "Customs—  
"Dues—Morpeth and Newcastle."

## No. 1.

MORPETH, N. S. W.

No Customs Duties are collected at Morpeth. The Officer is stationed there for the protection of the Revenue, and to act as Locker to the Bonding Store in that place.

J. GIBBES,

Collector of Customs.

## No. 2.

MORPETH, N. S. W.

A Return of the Expenses incurred on account of the Customs' Department at Morpeth, from the 1st of January to the 30th April, 1856. .... £106 13 4

## No. 3.

A Return of the Expenses incurred on account of the Customs' Department at Morpeth, from the 1st of May to the 30th June, 1856 ..... £53 6 8

J. GIBBES,

Collector of Customs.

## No. 4.

PORT OF NEWCASTLE, N. S. W.

A Return of the Expenses incurred on account of the Customs' Department at Newcastle, from the 1st of January to the 30th April, 1856 ..... £465 17 8

## No. 5.

A Return of the Expenses incurred on account of the Customs' Department at Newcastle, from the 1st of May to 30th June, 1856 ..... £230 19 10

J. GIBBES,

Collector of Customs.

## No. 6.

PORT OF NEWCASTLE, N. S. W.

A Return of the amount of Customs' Duties collected at Newcastle, from the 1st of January to the 30th April, 1856 ..... £1274 14 4

## No. 7.

A Return of the amount of Customs' Duties collected at Newcastle, from the 1st of May to the 30th June, 1856 ..... £2421 12 10

J. GIBBES,

Collector of Customs.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the information gathered is both reliable and comprehensive.

The third part of the report focuses on the results of the analysis. It shows a clear upward trend in the data over the period studied. This suggests that the current strategies being implemented are effective and should be continued.

Finally, the document concludes with a series of recommendations for future actions. These include further refining the data collection process and exploring new opportunities for growth. The author believes that with continued effort, the organization can achieve its long-term goals.

1856.

NEW SOUTH WALES,

## CUSTOMS' DUES, MORPETH.

(LETTER FROM COLONEL GIBBES, COLLECTOR OF CUSTOMS.)

*Ordered by the Legislative Assembly to be Printed, 19 September, 1856.*

THE COLLECTOR OF CUSTOMS to THE COLONIAL SECRETARY, *respecting the Returns of Customs' Duties collected at Morpeth and Newcastle.*

(No. 104.)

*Custom House, Sydney,*

*18 September, 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 17th instant, calling on me for further information respecting the Return furnished by this Office of the amount of Duties collected at Morpeth, for the first six months of the present year, and which Return was "Nil."

2. In reply, I beg to say that no Duties were, or could be, collected *officially* at Morpeth, which is not a Port of Entry, or a port at all, but merely a River Station attached to the Port of Newcastle, for the convenience of the trade carried on by steamers between Sydney and Maitland.

3. The Landing Waiter at Morpeth is neither a Collector or Sub-Collector of Customs, and consequently not eligible under the Customs Regulations to receive Duties; neither is it usual to allow a Bonding Store to be established at so great a distance from the Port of Entry as Morpeth is from Newcastle; but, considering when the application was made to me by Mr. Taylor, that such an establishment would be very advantageous to the residents in that part of the Colony, and that arrangements could be made without putting the Government to additional expense, or the Revenue in jeopardy, I at once recommended it to His Excellency the Governor General.

4. I went further, and desired that Mr. Allman should receive, as a deposit, any moneys tendered, and forward them to his superior officer, the Sub-Collector of Newcastle, in whose account of Duties rendered to the Auditor General they must appear, as that officer neither would or could recognize any accounts from Morpeth.

I have, &c.,

J. GIBBES,

Collector of Customs.

THE HONORABLE  
THE COLONIAL SECRETARY.

&c.,            &c.,            &c.

[*Enclosure to the foregoing.*]

(No. 162)

*Custom House, Sydney,*

*10 October, 1856.*

SIR,

I do myself the honor to transmit herewith an application from Mr. James Taylor to be allowed to use part of his buildings at Morpeth as a public Bonding Store; and as it appears from the Sub-Collector of Customs of Newcastle's letter of the 2nd instant, on the subject, as well as a memorial (herewith enclosed) from the inhabitants of the Hunter River District, that it would be a great benefit to them, and as no additional expense will be incurred by the Government in consequence, as the officer at Morpeth can perform the duties of Locker, I beg to recommend the application to the favorable consideration of His Excellency the Governor General.

I have, &c.,

J. GIBBES,

Collector of Customs.

THE HONORABLE  
THE COLONIAL SECRETARY.

&c.,            &c.,            &c.





1856.

NEW SOUTH WALES.

CUSTOMS' DUES.

(MORPETH AND NEWCASTLE.)

*Return to Order : MR. ARNOLD, 14 November, 1856.*

*Ordered by the Legislative Assembly to be Printed, 25 November, 1856.*

A RETURN of the Amount of Customs' Duties paid from Taylor's Store at Morpeth, and from Bingle and Sons Store at Newcastle, from the 1st November, 1855, to the 20th November, 1856.

	MORPETH.	NEWCASTLE.
1855.	£ s. d.	£ s. d.
November .....	143 1 0	66 3 0
December .....	203 17 6	33 15 11
1856.		
January .....	282 16 10	52 10 2
February .....	253 12 6	202 16 10
March .....	203 0 1	64 15 2
April .....	142 2 1	72 5 5
May .....	733 18 9	244 5 5
June .....	1,165 1 0	278 7 6
July .....	660 16 1	233 8 6
August .....	1,043 7 7	308 12 1
September .....	795 16 4	105 7 7
October .....	576 14 1	37 1 3
November (to 20th.) .....	305 0 5	27 0 0
	£6,569 4 3	£1,786 8 10

Custom House, Newcastle, }  
24 November, 1856. }

C. BOLTON,  
Sub-Collector.

J. GIBBES,  
Collector.



1856.

NEW SOUTH WALES.

ALTERATION OF THE TARIFF.

*Ordered by the Legislative Assembly to be Printed, 28 October, 1856.*

To the Honorable the Members of the Legislative Assembly, in Parliament assembled.

The Petition of the undersigned, Merchants and Traders of Sydney, present at a Public Meeting held at the Exchange Room on Monday, the 22nd September, 1856, and others,

HUMBLY SHEWETH,

That, in their opinion,

I. It is highly objectionable to resort to frequent alterations in the Tariff, even as a temporary expedient, to meet the exigencies of the Public Service, inasmuch as they are extremely injurious to the free course of trade, and prejudicial to the public interest, especially at the present time, when a movement has been originated for the purpose of promoting an assimilation of the Tariff of the Australasian Colonies.

II. The additions to the Tariff proposed by the present Government are in themselves objectionable, for the following reasons :

- 1. The proposed duty on unmanufactured wood, iron, slates and oils, is especially objectionable in this Colony, where the cost of building is already enormous.
- 2. The proposed duty on flour and grain is highly inexpedient in a Colony which does not at present produce a sufficient quantity of breadstuffs for its own consumption.
- 3. The imposition of a duty upon packages according to their size, without regard to their value, is unjust in principle, unequal in operation, and repugnant to the usages of trade.
- 4. And, further, the general scheme ignores the principle that raw materials imported for the purpose of manufacture should be exempt from taxation.

III. As the Harbour of Port Jackson is one of the finest in the world, the fiscal Regulations of New South Wales should be so devised as to encourage the principles of Free Trade, with a view to render her metropolis an advantageous entrepôt for the surrounding Colonies.

IV. To meet the present exigencies of the Public Service, and until the Tariff can be maturely revised, direct taxation would be less objectionable than the additions now proposed.

Your Petitioners therefore humbly pray that your Honorable House will be pleased to take the premises into consideration.

And your Petitioners, as in duty bound, will ever pray, &c., &c.

Here follow 143 signatures.



1857.

NEW SOUTH WALES.

CUSTOMS' DUTIES.

(INCREASE OF ON OLD TOM.)

Ordered by the Legislative Assembly to be Printed, 13 January, 1857.

To the Honorable the Legislative Assembly of New South Wales.

The Petition of the undersigned Merchants and Traders of the City of Sydney,

RESPECTFULLY SHEWETH:—

That an order has been issued from the Treasury, under the authority of the Minister of that Department, directed to the Collector of Customs, and inserted in the Government Gazette, of Tuesday, 30 December, 1856, instructing that officer to levy on the spirit known by the designation of "Old Tom," the rate of ten shillings the gallon, without allowing for the reduced strength of the said spirit, causing an increase of duty ranging from four to five shillings per gallon on this article.

That this order has been issued in consequence, as therein alleged, of the strength of that spirit not being determinable by the test afforded by Sykes' Hydrometer, and, therefore, classing this spirit with those articles mentioned in the Schedule to the Act of Council, 19 Victoria, No. 14, viz:—"Spirits, Cordials, Liqueurs, or Strong Waters, sweetened or mixed with any article so that the degree of strength cannot be ascertained by Sykes' Hydrometer."

That since the passing of the Act above referred to, as well as previously, the Department of Customs, whose province it is to carry out the provisions of this Act, has ignored the category within the application of which this spirit is now brought by the order above referred to, as applying to or as including the said spirit, and has accordingly, in every instance, tested the strength thereof by Sykes' Hydrometer, duly recorded the same in the Customs Books, and by such and by receiving the duties agreeably thereto, have published to the public at large such strengths, and led the public to understand that such were the true strengths, and to believe that the Customs would continue to receive the duties on the said spirit according to such strengths.

That on the faith of this rule, so established by the Department of Customs, importers have accompanied their orders to Great Britain by special instructions for the shipment to this market of the spirit in question at certain reduced strengths, to meet the requirements and conveniences of trade suggested by the peculiar circumstances of the Colony.

That Traders have operated in this article in our own market, in perfect reliance on the validity of this rule so established, as they were warranted in doing, viewing the Customs Department as the recognised exponent of Government in the matter, and that the stocks in the said article, so purchased and held by them in good faith, will be rendered valueless in this market by the effect of this new order, if the increased rate of duty be allowed to attach.

That it was in consequence of the high rate of duty leviable on this spirit that it became necessary to order the same from Great Britain at further reduced strengths, in order to bring it into trade here, and of consequence within the reach of consumption.

That your Petitioners, submitting the premises to your consideration, rely upon your Honorable House adopting the inference that reason and justice point to, viz.:—that of exempting from the increased rate of duty the stocks in hand, in such way or by such measure as to the wisdom of your Honorable House may seem fit.

That your Petitioners submit, beyond doing justice to the present holders of "Old Tom" spirit, that the continuance of the rate of duty now proposed is undesirable, as it would amount virtually to a prohibition to the importation and consumption of that article.

That your Petitioners conceive it would be neither politic nor just to impose a rate of duty on an article of British manufacture, which, whilst it would have the effect of shutting out the same from consumption here, would unduly favour the consumption of articles of Foreign production.

Your Petitioners, therefore, humbly pray that your Honorable House, representing British sentiment and principle, will adopt such measures as will not only reach the case of the present holders of the spirit in question, but also by a suitable rate of duty, say on the liquid gallon, give encouragement to the future trade in this article.

And your Petitioners will, as in duty bound, ever pray, &c., &c.

[Here follow 61 Signatures.]

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1856.

## NEW SOUTH WALES.

## BONDED WAREHOUSE KEEPERS AT MORETON BAY.

(LICENSE FEE.)

*Ordered by the Legislative Assembly to be Printed, 28 November, 1856.*

To the Honorable the Legislative Assembly of New South Wales.

The Petition of the undersigned, proprietors of Bonded Warehouses in the Town of Brisbane,—

RESPECTFULLY SHEWETH,

That your Petitioners are the owners and occupiers of licensed Bonded Warehouses in the Town of Brisbane, and Port of Moreton Bay, and they observe that it is the intention of the Government, towards the ways and means, and to meet the estimated expenditure of New South Wales for the year 1857, that there shall be taken and levied upon owners of all Bonded Warehouses in all parts of the Colony, an annual fee at and after the rate of fifty pounds sterling for any such licensed Bonded Warehouse.

That of the dutiable goods for consumption, both for Brisbane, Ipswich, and the more distant towns of the interior, only a small portion is received in this port under bond, the greater part arriving from Sydney duty paid.

That the Bonded Stores occupied by your Petitioners, though certainly of great convenience for their own business, and of equal advantage to the Government, in the accommodation which they afford for lodging goods subject to duty; yet, for the reason they have stated, that the greater part of the bonded goods which are consumed in these districts arrive duty paid, your Petitioners derive no adequate return for store rent, in respect of goods deposited in their warehouses, which alone would justify the imposition of any tax whatever.

That your Petitioners have been subjected to considerable outlay in building suitable Bonded Stores, for which they receive no adequate return, owing, as above stated to the fact, that nearly all dutiable goods for consumption arrive in the district duty paid, and it would be injustice to tax them for a public convenience for which they receive no commensurate benefit.

Your Petitioners therefore humbly pray, that your Honorable House will consider the foregoing premises, and, as affects your Petitioners, that you will not pass into law any motion having for its object the imposition of a tax on the owners of Bonded Warehouses in the Port of Moreton Bay.

And your Petitioners will ever pray, &c.

\* [Here follow 4 Signatures.]





1857.

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NEW SOUTH WALES.

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CUSTOMS RETURNS.

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*Ordered by the Legislative Assembly to be Printed, 6 January, 1857.*

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RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 9 December, 1856, for,—

- “ (1.) A Return of all Bonded Warehouse-keepers; distinguish-  
 “ ing the names of the persons licensed, the street or place in  
 “ which each Warehouse is situated, the Port or District for  
 “ which the License is granted, and the date of License.
- “ (2.) A Return of the proceeds of fines, seizures, and satisfaction  
 “ made, in the Customs Department, from 1st October, 1852, to  
 “ 1st October, 1856; together with an account of the distribution  
 “ of the net proceeds thereof,—shewing the share awarded to  
 “ the Officers of Customs.
- “ (3.) A Return of the number of Entries passed in the Long  
 “ Room of the Customs Department, at the Port of Sydney, for  
 “ each of the years ending on the 1st October, 1853, and 1st  
 “ October, 1856.
- “ (4.) A Return shewing similar particulars from the Custom  
 “ House, Newcastle, and the Custom House, Brisbane, respec-  
 “ tively.
- “ (5.) A Return of the gross amount of the Receipts of the Cus-  
 “ toms Revenue of New South Wales, from the 1st October,  
 “ 1852, to the 1st October, 1856, and the cost of collection  
 “ thereof.
- “ (6.) A Return of the amount of Revenue received for duty on  
 “ Colonial Spirits, for the like period.
- “ (7.) A Return of the cost of collection of that Revenue, during  
 “ the same period.”
-

## CUSTOMS RETURNS.

## No. 1. (A.)

NEW SOUTH WALES, }  
PORT OF SYDNEY. }

A RETURN of all Bonded Warehouse-keepers, Names of Persons Licensed, Street or Place in which Warehouse is situated, Port or District for which License is granted, and date of License.

PROPRIETOR OF WAREHOUSE.	LICENSED OCCUPIER.	LOCALITY OF WAREHOUSE.	PORT OR DISTRICT.	DATE OF LICENSE.
Campbell and Co. . . . .	Campbell and Co.	Campbell's Wharf, Sydney Cove . . .	Sydney.	1 Jan. 1830
R. E. and F. Tooth . . . . .	R. E. and F. Tooth	Argyle-street . . . . .	"	1 Oct. 1855
Henry Moore . . . . .	Henry Moore . . . . .	Moore's Wharf, Darling Harbour . . .	"	1 Jan. 1852
T. Underwood . . . . .	E. H. Pollard . . . . .	Queen's Place . . . . .	"	26 May 1840
John Lamb . . . . .	Lamb, Spry, & Co.	Lamb's Wharf, Darling Harbour . . .	"	12 Mar. 1859
Robert Towns . . . . .	R. Towns and Co.	Towns' Wharf, Ditto . . . . .	"	1 Oct. 1844
Exchange Company . . . . .	Henry Fisher . . . . .	Pitt-street . . . . .	"	20 May 1855
G. A. Lloyd . . . . .	G. A. Lloyd and Co.	Off George-street . . . . .	"	2 Feb. 1854
Walker and Co. . . . .	Wilkinson Brothers	Walker's Wharf, Darling Harbour . . .	"	1 Jan. 1856
W. C. Botts . . . . .	Willis, Merry, & Co.	Botts' Wharf, Ditto . . . . .	"	1 Jan. 1854
John Macnamara . . . . .	Macnamara, & Co.	Macnamara's Wharf, Ditto . . . . .	"	19 Nov. 1853
Charles Bath . . . . .	J. M. Leigh . . . . .	Macquarie Place . . . . .	"	23 June 1854
E. Campbell (tertius.)	Mitchell and Co. . . . .	Circular Wharf . . . . .	"	1 Jan. 1854
John Gilchrist . . . . .	Gilchrist, Watt & Co.	Margaret-street . . . . .	"	3 July 1856
— Morehead . . . . .	Anderson Brothers	New Pitt-street . . . . .	"	15 Nov. 1853
Moses and Son . . . . .	Kirchner and Co. . . . .	Wynyard-street . . . . .	"	14 Mar. 1854
J. King . . . . .	Smith Brothers . . . . .	Sussex-street . . . . .	"	24 July 1843
J. Cox . . . . .	Griffiths, Fanning.	Spring-street . . . . .	"	7 July 1845
D. Cooper . . . . .	D. Cooper and Co.	George-street . . . . .	"	20 Apr. 1854
Brown and Co. . . . .	Brown and Co. . . . .	Spring-street . . . . .	"	15 Mar. 1854
W. H. Aldis . . . . .	W. H. Aldis . . . . .	George-street . . . . .	"	9 Augst. 1854
Hugh Dixson . . . . .	H. Dixson . . . . .	Macquarie-street . . . . .	"	4 Jan. 1854

J. GIBBES,

Collector of Customs.

## No. 1. (B.)

NEWCASTLE.

A RETURN of all Bonded Warehouse-keepers at the Port of Newcastle.

NAME OF WAREHOUSE-KEEPER.	APPOINTED.	STREET.
Bingle and Son . . . . .	21 July, 1855 . . . . .	King-street, Newcastle. Corner of Northumberland and Swan-streets, (Morpoth.)
James Taylor . . . . .	20 October, 1855 . . . . .	

Custom House, Newcastle,

31 December, 1856.

C. BOLTON,

Sub-Collector.

## No. 1. (c.)

BRISBANE, }  
PORT OF MORETON BAY. }

A RETURN of all Bonded Warehouse-keepers at this Port, distinguishing the names of the persons Licensed, the Street or Place in which each Warehouse is situated, and the Date of License.

No.	NAME.	SITUATION.	DATE.
1.	John Richardson . . . . .	Eagle-street, Brisbane . . . . .	25 September, 1849.
2.	George Raff and Co. . . . .	Eagle-street, Brisbane . . . . .	18 January, 1853.
3.	Francis Edward Bigge . . . . .	Shore-street, Cleveland . . . . .	24 August, 1853.
4.	Robert Towns and Co. . . . .	Stanley-street, Brisbane . . . . .	22 December, 1853.
5.	John and George Harris . . . . .	William-street, Brisbane . . . . .	6 February, 1855.

Custom House, Brisbane,

22 December, 1856.

W. A. DUNCAN,

Sub-Collector.

No.

## CUSTOMS RETURNS.

3

## No. 2.

RETURN of the Proceeds of Fines, Seizures, and Satisfactions, made in Customs Department, from the 1st October, 1852, to the 1st October, 1856; together with Account of the Distribution of the Net Proceeds thereof, shewing the Share awarded to the Officers of Customs.

1853. Dec. 1	By Gross Proceeds of Rawack's Penalty, No. 1 of 1853 .. .. .	20 0 0	1854. Mar. 28	To Net Proceeds of No. 1 of 1853 .. .. .	£20 0 0	
				Crown's Share paid ..	10 0 0	
				Officer's Share paid ..	10 0 0	20 0 0
1854. Jan. 14	" Gross Proceeds of Penalty, "Antelope," No. 1 of 1854 .. .. .	100 0 0	" "	" Net Proceeds of No. 1 of 1854 .. .. .	91 10 0	
				Crown's Share paid ..	45 15 0	
				Officer's Share paid ..	45 15 0	91 10 0
" 20	" Gross Proceeds of No. 2 of 1854 ..	17 6 3	" "	" Net Proceeds of No. 2 of 1854 .. .. .	17 6 3	
				Crown's Share paid ..	8 13 2	
				Officer's Share paid ..	8 13 1	17 6 3
July 1	" Gross Proceeds of No. 3 of 1854 ..	14 3 0	Sept. 30	" Net Proceeds of No. 3 of 1854 .. .. .	14 3 0	
				Crown's Share paid ..	7 1 6	
				Officer's Share paid ..	7 1 6	14 3 0
Oct. 3	" Gross Proceeds of Penalty, Scott ..	10 0 0	Oct. 3	" Bill of Costs .. .. .		10 0 0
	" Gross Proceeds of No. 4 of 1854 ..	20 0 0	1855. Apr. 2	" Net Proceeds of No. 4 of 1854 .. .. .	20 0 0	
				Crown's Share paid ..	10 0 0	
				Officer's Share paid ..	10 0 0	20 0 0
1855. Mar. 30	" Gross Proceeds of No. 5 of 1854, Albury .. .. .	30 5 4	Oct. 24	" Net Proceeds of No. 5 of 1854 .. .. .	30 5 4	
				Crown's Share paid ..	15 2 8	
				Officer's Share paid ..	15 2 8	30 5 4
June 16	" Gross Proceeds of No. 1 of 1855, Albury .. .. .	71 15 11	" "	" Net Proceeds of No. 1 of 1855 .. .. .	71 15 11	
				Crown's Share paid ..	35 18 0	
				Officer's Share paid ..	35 18 0	71 15 11
Aug. 16	" Gross Proceeds of No. 2 of 1855, Albury .. .. .	50 0 0	" "	" Net Proceeds of No. 2 of 1855 .. .. .	50 0 0	
				Crown's Share paid ..	25 0 0	
				Officer's Share paid ..	25 0 0	50 0 0
Sept. 27	" Gross Proceeds of Penalty, Alex. Campbell .. .. .	25 0 0	" "	" Net Proceeds of No. 3, 1855, Penalty .. .. .	25 0 0	
				Crown's Share paid ..	12 10 0	
				Officer's Share paid ..	12 10 0	25 0 0
Oct. 24	" Gross Proceeds of No. 4 of 1855 ..	3 0 5	" "	" Net Proceeds of No. 4, 1855 .. .. .	3 0 5	
				Crown's Share paid ..	1 10 3	
				Officer's Share paid ..	1 10 2	3 0 5
" "	" Gross Proceeds of No. 5 of 1855 ..	34 0 0	Dec. 15	" Net Proceeds of No. 5 of 1855 .. .. .	33 0 0	
				Crown's Share paid ..	16 10 0	
				Officer's Share paid ..	16 10 0	33 0 0
" "	" Gross Proceeds of Penalty of Linker, Hyder, and Myer .. .. .	195 15 0	" "	" Net Proceeds of Penalty, Linker, &c., No. 5 of 55 ..	142 6 4	
				Crown's Share paid ..	71 3 2	
				Officer's Share paid ..	46 0 0	
				Informer's Share, $\frac{1}{3}$ of Officer's .. .. .	25 3 2	142 6 4
1856. Feb. 20	" Gross Proceeds of No. 1 of 1856 ..	4 12 0	1856.	" Net Proceeds of No. 1 of 1856 .. .. .	4 12 0	
				Crown's Share .. .. .	2 6 0	
				Officer's Share .. .. .	2 6 0	4 12 0
Mar. 16	" Gross Proceeds of No. 2 of 1856 ..	37 6 8	" "	" Net Proceeds of No. 2 of 1856 .. .. .	37 6 8	
				Crown's Share .. .. .	18 13 4	
				Officer's Share .. .. .	18 13 4	37 6 8
Total Amount divided amongst the various Seizing Officers—£254 19s. 9d.						
				* Cartage of Goods to and fro, £8 10s.		
				† Cartage .. .. .	£1 0 0	£58 8 8
				Bill of Costs .. .. .	57 8 8	

Custom House, Sydney,  
18 December, 1856.

J. GIBBES,  
Collector.

## No. 3.

NEW SOUTH WALES, }  
PORT OF SYDNEY. }

A RETURN of the number of Entries passed in the Long Room of the Customs Department at this Port, for each of the years ending on the 1st October, 1853, and 1st October, 1856.

	Numbers.
From 1st October, 1852, to 30th September, 1853 ... ..	27,322
From 1st October, 1853, to 30th September, 1856 ... ..	24,238

J. GIBBES,  
*Collector of Customs.*

## No. 4. (A)

NEWCASTLE.

A RETURN of the number of Entries passed at the Custom House, Newcastle, in each of the years ending on the 1st October, 1853, and 1st October, 1856.

YEAR.	NO. OF ENTRIES.
Ending 1st October, 1853...	393
Ending 1st October, 1856...	581

*Custom House, Newcastle,*  
31 December, 1856.

C. BOLTON,  
*Sub-Collector.*

## No. 4. (B)

BRISBANE, }  
PORT OF MORETON BAY. }

A RETURN of the number of Entries passed at the Custom House, Brisbane, in the years ending 1st October, 1853, and 1st October, 1856.

YEAR.	NO. OF IMPORTS ENTERED.	NO. OF EXPORTS ENTERED.	TOTAL.
1853.	287	44	331
1856.	679	51	730

*Custom House, Brisbane,*  
22 December, 1856.

W. A. DUNCAN,  
*Sub-Collector.*

## Nos. 5 &amp; 6.

NEW SOUTH WALES.

A RETURN of the gross amount of the Receipts of the Customs' Revenue of New South Wales, from the 1st October, 1852, to the 1st October, 1856, and the cost of the collection thereof.

YEAR.	REVENUE.	COST.
1852*	61,806 16 2	3,507 19 1
1853	354,938 9 6	20,258 9 1
1854	405,720 10 11	26,575 12 0
1855	421,735 9 3	27,178 3 11
1856†	338,536 10 8	18,646 14 4
Totals.....	£1,582,737 16 6	96,166 18 5

\* From 1st October to 31st December.

† First three quarters only.

J. GIBBES,  
*Collector of Customs.*

## CUSTOMS RETURNS.

5

## No. 7.

RETURN of the amount of Revenue received for Duty on Colonial Spirits, from the 1st of October, 1852, to the 30th of September, 1856, both days inclusive.

PERIOD.	AMOUNT.
1 Oct., 1852, to 30 Sept., 1856.....	£158,597 4 4

*The Treasury, Sydney,*  
17 December, 1856.

## No. 8.

A RETURN of the Cost of Collection of the Revenue collected by the Department of the Inspector of Distilleries, during the period from 1st October, 1852, to 30th September, 1856.

	1 OCTOBER, 1852, TO 30 SEPTEMBER, 1853.	1 OCTOBER, 1853, TO 30 SEPTEMBER, 1854.	1 OCTOBER, 1854, TO 30 SEPTEMBER, 1855.	1 OCTOBER, 1855, TO 30 SEPTEMBER, 1856.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries of Inspectors.....	2,264 0 2	2,658 11 4	2,785 14 4	2,550 0 0
Office Allowances .....	25 0 0	39 9 7	51 2 0	42 9 10
Distillery Clerk .....	174 19 10	200 0 0	195 0 0	200 0 0
Saccharometer.....	14 0 0	98 5 0	35 0 0	21 0 0
Stationery, Bookbinding, Stores, and Incidental Expenses.....	20 17 9	18 1 5	19 7 1	9 2 11
Fuel and Light .....	19 15 9	18 15 10	17 19 3	12 10 7
Repairs to Office .....	88 4 5	.....	.....	.....
Seizure of an Illicit Still .....	.....	.....	.....	15 0 0
	2,606 17 11	3,033 3 2	3,104 2 8	2,850 3 4

*Audit Office, New South Wales,*  
17 December, 1856.

W. C. MAYNE,  
A. G.



1857.

NEW SOUTH WALES.

DEFICIENCY IN BONDED STORES.

(REPORT OF COLLECTOR OF CUSTOMS.)

Ordered by the Legislative Assembly to be Printed, 12 February, 1857.

Notes and Proceedings of the Legislative Assembly, No. 85, 6 February, 1857, page 4.

With reference to the proposed "Question" by Mr. Weekes—will the Collector of Customs have the goodness to inform the Honorable the Treasurer if any other deficiencies have been discovered than that in Lamb's Bonded Store, reported by Colonel Gibbes on the 19th ultimo?

HENRY LANE.

Treasury, 7 February, 1857.

In compliance with the directions of the Honorable the Minister of Finance, that Stock should be taken, as far as practicable, in an expeditious manner, in the different Bonding Warehouses, in consequence of the discovery made, that certain casks of low-duty goods were missing from Lamb's Store,—I directed Mr. Still, Inspector of Distilleries, and Mr. Hindmarsh, one of my Landing Waiters, to visit those Warehouses, twenty-two in number, and count the packages of brandy, gin, rum, whiskey, wine, tobacco, and cigars, without gauging, (as such would occupy months, and tend to nothing,) leaving tea, sugar, coffee, ale, and other low-duty articles for a second survey, when the first may be finished.

The examination commenced on the 19th ultimo, (and has been continued daily,) since which eleven Bonding Warehouses have been visited; and comparing the quantities found in Bond with the quantities standing in the Warehouse Keeper's Ledger, no further deficiencies have been discovered.

With regard to the wording of Mr. Weekes' intended motion, "Whether in the recent taking of Stock, in the Bonding Stores, by the Customs Authorities"—I beg to explain that no Stock was taken, according to the meaning of the term.

Goods in Bond after three years are considered as over-time goods, and are at once to be cleared from the Warehouse by payment of the duty, or by exportation—otherwise to be sold by the Customs.

In order to effect this, the Warehouse Keeper goes through his Stock Book at the end of each year, and extracts the number of packages of that standing in each Warehouse, and sends a list to the Lockers, who ascertain that they are there.

This was the case in regard to Lamb's Warehouse, when it was discovered by the Locker on receiving the Warehouse Keeper's list, that seventy-two packages of Port Wine, warehoused in October, 1853, could not be found or accounted for.

The

The names of the Eleven Warehouses examined up to Saturday inclusive:—

	Pkges.		Pkges.
Leigh's .....	2144	Circular .....	534
Griffiths' .....	658	Lloyd's .....	7799
Cooper's .....	1121	Smith's .....	2702
Anderson's .....	1478	Aldis' .....	512
Brown's .....	1665	Kirchner's .....	3449
Exchange .....	1622		
		Total .....	23,684

The importation consisted of 6 pipes, 20 hogsheads, and 80 quarter-casks, ex "Amalia," from Oporto, containing 3824 gallons of wine,—and of this quantity 1098 gallons are written off as duty paid, and delivered for exportation.

The balance has disappeared in some mysterious manner, which no one that I have examined can account for; and Messrs. Lamb and Spry have been called upon to pay the duty of 2s. per gallon under the present Tariff, (instead of the 1s. under the Tariff which existed when the wine must have been delivered,) amounting to £272 12s., which they have ordered their Custom House Agent to pass entries for.

Messrs. Lamb and Spry have made no concealment of the transaction.

They have admitted that no duty could have been paid, as it has not been charged to the Consignor; and also that the packages were taken out of the store at different times, during the years 1854, 5 and 6, in small or moderate quantities.

All that I can discover is, that a part of these wines are supposed to have been removed from the Bonding Warehouse, in consequence of its crowded state, into one of the Free Stores, but by whose authority, or under whose superintendence, I cannot ascertain, (the Locker of that day having been for some time past lying in a helpless state from paralysis,) and thus after a time were lost sight of, or looked upon as free goods, and delivered as such when sold.

The difficulty however of reconciling this is, that under such circumstances the Queen's Lock would, or at any rate should have been put on the Free Store door; and there is no evidence to shew now, whether such was the case or not.

Neither of the present partners were here at the time, and Mr. Walter Lamb, who then conducted the business of the firm, is at present off the Colony; but he is expected back in a few weeks, and may possibly be able to throw some light on the subject.

J. GIBBES,  
Collector.

9 February, 1857.



1857.

NEW SOUTH WALES.

**BONDED WAREHOUSES.**

(REPORT OF STOCKTAKING.)

*Ordered by the Legislative Assembly to be Printed, 17 March, 1857.**Customs, Sydney,  
15 March, 1857.*

SIR,

I beg leave to state that Mr. Still, who was appointed to take stock in the several Bonding Warehouses, closed his inspection on the 6th instant, and that the comparing his returns with the Warehouse-keepers Stock Books has occupied the Clerks in the Warehouse Branch from the 27th ultimo to the 13th instant, which will account for my not having sooner made any Report.

2. I am happy to say that the discrepancies are insignificant, and that the deficiencies out of *fifty-two thousand two hundred and forty-six packages in Bond, amount to only twenty-seven quarter casks of wine.*

3. I do not mean to say that other articles are not apparently missing; but where three or four cases of brandy, under a particular mark, which stand in the Warehouse Books as being in the Warehouse, are not to be found, five or six other cases of brandy of another mark, which have been, or rather ought to have been, delivered according to those books will be found to be still in the Warehouse;—to account for which is perfectly easy, as mistakes have been made in the marks and numbers, and wrong cases and casks in consequence delivered to the parties who have paid the duty.

4. Again, there are numerous packages on which the marks and numbers have become obliterated, since being bonded, which can neither be identified or traced, but which are, of course, a part of those lots which are found to be short in number under their respective marks.

5. There are also some goods in Bond which have paid duty, but not been removed; irrespective of these, however, the quantity in Bond over what, according to the books, ought to be there, but which is not there, is entirely in favor of the revenue to (I should say) a considerable amount.

6. I purpose in future to make the attempt of taking stock every six months, by a process which I propose to adopt, and of having a half-yearly sale of overtime goods, which will, I expect, prevent to a certain extent any such mistakes from arising again.

I have, &amp;c.,

J. GIBBES,

Collector of Customs.



1857.

NEW SOUTH WALES.

Legislative Assembly.

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CUSTOMS DEPARTMENT.

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## PROGRESS REPORT

FROM THE

THE SELECT COMMITTEE

ON THE

## CUSTOMS DEPARTMENT;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

---

*ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,**20 February, 1857.*

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SYDNEY:

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.—  
1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

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VOTES No. 36. FRIDAY, 31 OCTOBER, 1856.

14. Customs Department:—Mr. Nichols moved, pursuant to *amended* notice,—
- (1.) That a Select Committee be appointed to inquire into the Management of the Customs Department of the Colony, and the future arrangement for carrying on the business of that Branch of the Public Service.
- (2.) That such Committee consist of Mr. Robert Campbell, Mr. Egan, Mr. Gordon, Mr. Buckley, Mr. Lord, Mr. Barker, Mr. Weekes, Mr. Holt, Mr. Irving, and the Mover.
- Question—(1.) That a Select Committee be appointed to inquire into the Management of the Customs Department of the Colony, and the future arrangement for carrying on the business of that branch of the Public Service,—put and passed.
- Question—(2.) That such Committee consist of Mr. Robert Campbell, Mr. Egan, Mr. Gordon, Mr. Buckley, Mr. Lord, Mr. Barker, Mr. Weekes, Mr. Holt, Mr. Irving, and the Mover,—put and passed.
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VOTES No. 62. THURSDAY, 18 DECEMBER, 1856.

12. Securities given by Officers of Customs:—Mr. Donaldson moved, pursuant to notice, That the Correspondence respecting Securities given by Officers of Customs be referred to the Select Committee on the Customs Department.
- Question put and passed.
- 

VOTES No. 67. TUESDAY, 6 JANUARY, 1857.

3. Paper:—Mr. Donaldson laid upon the Table the Return to the *Order* made by this House on the 9th ultimo, on the motion of Mr. Nichols, for Customs Returns.
- Ordered to be printed, and referred to the Select Committee on the Customs Department now sitting.
- 

VOTES No. 68. WEDNESDAY, 7 JANUARY, 1857.

5. Disposal of the Commissariat Stores in George-street:—Mr. Donaldson moved, pursuant to notice, That the Return and Further Return to the Address on the subject of the Commissariat Stores in Lower George-street be referred to the Select Committee on the Department of Customs.
- Question put and passed.
- Ordered to be referred accordingly.
- 

VOTES No. 71. TUESDAY, 13 JANUARY, 1857.

6. Duty on "Old Tom":—Mr. Nichols moved, pursuant to notice, That the Petition of certain Merchants and Traders of the City of Sydney, praying for a modification of the Duty of Ten Shillings per Gallon, levied on the Spirit known by the designation of "Old Tom," presented by him on the 9th instant, be printed, and referred to the Select Committee on the Customs Department now sitting.
- Debate ensued.
- Question put and passed.
- Ordered to be printed, and referred accordingly.
- 

VOTES No. 92. FRIDAY, 20 FEBRUARY, 1857.

8. Customs Department:—Mr. Holt, as Chairman, brought up a Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Customs Department, appointed on the 31st October last.
- Ordered to be printed.
-

1857.

## CUSTOMS DEPARTMENT.

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**PROGRESS REPORT.**


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THE SELECT COMMITTEE of the Legislative Assembly, appointed on 31st October, 1856, "to inquire into the Management of the Customs Department of the Colony, and the future arrangements for carrying on the business of that branch of the Public Service," and to whom were referred, on the 18th December last, "the Correspondence respecting Securities given by Officers of Customs," on the 6th and 7th ultimo respectively, several "Customs Returns" and "the Return and Further Return to the Address on the subject of the Commissariat Stores in Lower George-street," and on the 13th ultimo, "the Petition of certain Merchants and Traders of the City of Sydney, praying for a Modification of the Duty of Ten Shillings per Gallon, levied on the Spirit known by the designation of 'Old Tom'";—have agreed to the following Progress Report:—

Your Committee, in the prosecution of the inquiry entrusted to them, have taken the Evidence of several Witnesses; but, from the importance and extent of the subject, the incomplete state of the inquiry—in consequence of the great number of Witnesses still remaining to be examined, and the advanced period of the Session—which render its completion therein altogether impracticable, your Committee are of opinion that they will best perform their duty by at once submitting the Evidence already taken to the consideration of your Honorable House.

THOMAS HOLT,  
Chairman.

Legislative Assembly Chamber,  
Sydney, 20 February, 1857.

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PROCEEDINGS

## PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 20 NOVEMBER, 1856.

**Members Present:—**

Mr. Nichols,		Mr. Irving,
Mr. Barker,		Mr. Egan,
Mr. Campbell,		Mr. Buckley,
		Mr. Gordon.

Mr. Nichols was called to the Chair.

Committee deliberated as to their course of proceedings, and resolved upon taking evidence.

Motion made and *Question*,—"That J. G. N. Gibbes, Esquire, Collector of Customs, be summoned before this Committee, as a witness for to-morrow"—*agreed to*.

Committee then deliberated as to the best mode of conducting the examination of witnesses.

Motion made (Mr. Egan) and *Question*,—"That after the conclusion of the Chair-man's questioning, the examination be taken up by the Member nearest to the Chair on the left, and so passed on *seriatim* from Member to Member round the Table, it being, however, reserved to the discretion of any other Member during such examination to put, through the Chair, any incidental questions which might occur to him as bearing immediately upon the portion of the examination to which the witness was at the time being subjected, and as calculated to elucidate the same"—*agreed to*.

[Adjourned till to-morrow, at Twelve o'clock.]

FRIDAY, 21 NOVEMBER, 1856.

**Members Present:—**

Mr. Buckley,		Mr. Weekes.
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A Quorum of the Committee not being present,—

[Adjourned till Wednesday next, at Twelve o'clock.]

WEDNESDAY, 26 NOVEMBER, 1856.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.

Mr. Buckley,		Mr. Irving,
Mr. Lord,		Mr. Egan.

Mr. J. G. N. Gibbes, Collector of Customs, examined.

Motion made and *Question*,—"That J. G. N. Gibbes, Esquire, be again summoned before this Committee, as a witness, on Friday next"—*agreed to*.

[Adjourned till Friday next, at Twelve o'clock.]

FRIDAY, 28 NOVEMBER, 1856.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.

Mr. Weekes,		Mr. Buckley,
Mr. Gordon,		Mr. Holt,
		Mr. Barker.

Mr. J. G. N. Gibbes, Collector of Customs, further examined.

[Adjourned till Thursday next, at Twelve o'clock.]

THURSDAY, 4 DECEMBER, 1856.

**Members Present:—**

Mr. Nichols,		Mr. Weekes.
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A quorum of the Committee not being present,—

[Adjourned till Tuesday next, at Twelve o'clock.]

TUESDAY, 9 DECEMBER, 1856.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.

Mr. Egan,		Mr. Gordon,
Mr. Weekes,		Mr. Buckley,
		Mr. Lord.

Mr. George Thornton, examined.

[Adjourned till Thursday next, at Eleven o'clock.]

THURSDAY,

THURSDAY, 11 DECEMBER, 1856.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.  
 Mr. Irving, | Mr. Holt,  
 | Mr. Barker.

Mr. George Thornton, further examined.  
 [Adjourned till Tuesday next, at half-past Ten o'clock.]

TUESDAY, 16 DECEMBER, 1856.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.  
 Mr. Irving, | Mr. Buckley.  
 | Mr. Egan.

Mr. F. Gavling, Landing Surveyor, examined.  
 Motion made and Question,—“ That W. N. Llewellyn, Esquire, Chief Clerk, and  
 “ A. W. Rolleston, Esquire, First Landing Waiter, in the Customs Department, be summoned  
 “ before this Committee, as witnesses, on Friday next”—*agreed to.*  
 [Adjourned till Friday next, at Twelve o'clock.]

FRIDAY, 19 DECEMBER, 1856.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.  
 Mr. Weekes, | Mr. Buckley,  
 Mr. Gordon, | Mr. Barker,  
 | Mr. Holt.

The Chairman laid before the Committee the Correspondence between the Collector  
 of Customs and Colonial Treasurer, with respect to the grounds upon which certain of the  
 Custom House Officers do not give security, referred to the Committee, on the 18th instant.  
 Motion made (Mr. Gordon), and Question,—“ That the Correspondence be printed in  
 “ the Appendix to such Report as this Committee may hereafter make”—*agreed to.*  
 Mr. W. N. Llewellyn, Chief Clerk in Customs Department, examined.  
 [Adjourned till Tuesday, 6 January, at Eleven o'clock.]

TUESDAY, 6 JANUARY, 1857.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.  
 Mr. Weekes, | Mr. Barker,  
 Mr. Buckley, | Mr. Irving,  
 | Mr. Egan.

Mr. A. W. Rolleston, First Landing Waiter in the Customs Department, examined.  
 Committee deliberated.  
 Motion made and Question,—“ That Henry Fisher, Esquire, J.P. be summoned before  
 “ this Committee, as a witness, for Thursday next”—*agreed to.*  
 [Adjourned till Thursday next, at Twelve o'clock.]

THURSDAY, 8 JANUARY, 1857.

**Members Present:—**

Mr. Irving, | Mr. Buckley,  
 Mr. Weekes, | Mr. R. Campbell,  
 | Mr. Holt.

Mr. Irving, in the absence of the Chairman, was called to the Chair.  
 Resolution of the House, referring to the Committee, on the 6th instant, the following  
 Returns, viz:—

- “ (1.) A Return of all Bonded Warehouse-keepers; distinguishing the Names of the  
 “ persons licensed, the street or place in which each Warehouse is situated, the Port or  
 “ District for which the License is granted, and the date of License.  
 “ (2.) A Return of the proceeds of fines, seizures, satisfaction made, in the Customs  
 “ Department, from 1st October, 1852, to 1st October, 1856; together with an account of  
 “ the Distribution of the net proceeds thereof,—shewing the share awarded to the Officers  
 “ of Customs.”  
 “ (3.) A Return of the number of entries passed in the Long Room of the Customs  
 “ Department, at the Port of Sydney, for each of the years ending on the 1st October, 1853,  
 “ and 1st October, 1856.  
 “ (4.) A Return shewing similar particulars from all other Free Warehousing Ports  
 “ in the Colony.  
 “ (5.) A Return of the gross amount of the Receipts of the Customs Revenue of New  
 “ South Wales, from 1st October, 1852, to the 1st October, 1856.  
 “ (6.) A Return of the cost of the Collection of that Revenue during the same period.  
 “ (7.)

"(7.) A Return of the gross amount of Revenue collected by the Department of the Inspector of Distilleries, for the like period.

"(8.) A Return of the cost of Collection of that Revenue, during the same period."

—read.

Resolution of the House, referring to the Committee, on the 7th instant,—

"Return and Further Return to an Address relative to the disposal of the Commissariat Stores, in Lower George-street."—read.

Mr. *Henry Fisher* examined.

[Adjourned till Wednesday next, at Twelve o'clock.]

WEDNESDAY, 14 JANUARY, 1857.

**Members Present:—**

Mr. Nichols, | Mr. Irving.

A Quorum of the Committee not being present,—

[Adjourned till Wednesday, 28th instant, at Eleven o'clock.]

WEDNESDAY, 28 JANUARY, 1857.

**Members Present:—**

George Robert Nichols, Esquire, in the Chair.

Mr. Buckley, | Mr. Irving,

Mr. Egan, | Mr. Weekes.

By direction of the Chairman, Resolution of the House, referring to the Committee, on 13th instant, a Petition from certain Merchants and Traders of the City of Sydney, praying for a modification in the Duty at present payable on a Spirit called "Old Tom," read by the Clerk.

Petition then read.

Mr. *Aldis*, Tobacco Merchant, examined.

Committee then adjourned.

FRIDAY, 20 FEBRUARY, 1857.

**Members Present:—**

Mr. Holt,

Mr. R. Campbell,

Mr. Buckley,

Mr. Egan,

Mr. Irving,

Mr. Lord.

Mr. Egan having informed the Committee that, in consequence of severe indisposition, Mr. Nichols would be unable to resume his duties as Chairman.

Mr. Holt was called to the Chair.

The Chairman stated that the present Meeting of the Committee was convened for the purpose of considering the Draft Progress Report, which he now laid before the Committee.

Motion made (Mr. *Egan*) and *Question*,—"That the proposed Draft Progress Report be now read"—*agreed to*.

Report read accordingly.

Committee deliberated thereupon.

Motion made (Mr. *Buckley*) and *Question*,—"That this be the Progress Report of the Committee"—*agreed to*.

Chairman requested to report progress to the House, together with the Minutes of Evidence.

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1856.

NEW SOUTH WALES.

Legislative Assembly.

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

CUSTOMS' DEPARTMENT

WEDNESDAY, 26 NOVEMBER, 1856.

Present:—

MR. BUCKLEY,		MR. IRVING,
MR. EGAN,		MR. LORD,
	MR. NICHOLS.	

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

Lieutenant-Colonel J. G. N. Gibbes, Collector of Customs, called in and examined:—

1. *By the Chairman*: You are Collector of Customs for this Colony? I am.
2. When were you appointed? I think I took office here in April, 1834.
3. Were you appointed to the office of Collector originally? I was. I have been thirty-seven years a Collector.
4. By whom were you appointed? By the Lords of the Treasury.
5. Were you appointed by Commission? Yes.
6. At the time you were appointed was there a Comptroller of Customs as well? There was. It was in Jamaica I was first appointed.
7. When were you first appointed in this Colony? I do not recollect the month, but it was towards the end of 1833. I sailed in November of that year.
8. You have continued to fill the office of Collector of Customs from that time in this Colony? I have.
9. What salary was attached to the office when you were originally appointed? £1,500 a year were the emoluments.
10. What do you mean by the emoluments? The officers in Jamaica were paid by fees established by the Legislative Assembly; a salary was paid, a very small one, from England; but the emoluments of the office depended on fees collected there, which fees were established by the House of Assembly.
11. What was the salary or emoluments when you accepted office in this Colony? £1,000 a-year.
12. And no fees? No fees.
13. You have continued to receive the same salary since that time, with the exception of the short period during which the Gold Increase has been given? I have.
14. You were formerly responsible to the Commissioners of Customs? Yes.
15. You transmitted all your accounts to England for the purpose of being audited and finally settled? Yes.
16. At what period of time was the Customs' Department handed over to this Colony? On the 1st October, 1852.
17. Has any alteration taken place in the general management of the Customs' Department since that period? No, not any, that occurs to me.
18. In what way was this transfer of the duties of Customs made to the Colonial Government—by whose direction? By the direction of the Secretary of State. To the best of my recollection, he wrote out to the Governor General, to desire him to fix a time for transferring the Customs' Department from the Home Authorities to the Colonial Government. Mr. Merewether, the then Auditor General, and myself, were directed to report upon it, and we fixed the 30th September, 1852, as closing our connexion with the Home Government.

Lt.-Col.  
 J.G.N. Gibbes  
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Lt.-Col.  
J.G.N. Gibbes  
26 Nov., 1856.

19. From that time up to the present the Customs' Department has been under your management as before, but you are now responsible to the Colonial Government? Yes.
20. How have the accounts of the Customs been audited since that change? By a gentleman in the Auditor General's Office, appointed expressly for that purpose.
21. How often does the audit of the accounts take place? I believe it is almost constantly going on; I get queries from the Audit Office upon the accounts at all times.
22. *By Mr. Lord*: The accounts are not audited in your Office? No.
23. *By the Chairman*: I presume you make a periodical return of all matters connected with the receipt of Duties of Customs to the Auditor General? Every week.
24. And that audit is constantly going on, week by week? No. We send to the Audit Office an account of the moneys received each week, and the receipt for the money from the Colonial Treasury; but there is no audit on that. Once a quarter we send in the general accounts of the department to the Audit Office, and, of course, it takes a certain time to get them up; from the nature of the business of the department, we cannot send in our accounts for each quarter immediately on its conclusion; it takes some four or five weeks in the next quarter to close them.
25. Then the audit takes place quarterly? Yes.
26. The final audit? The final audit.
27. On the accounts being deemed satisfactory, you receive a discharge from the Auditor General, I presume? I have not as yet, but I think I ought to have one.
28. *By Mr. Lord*: How are the accounts kept in your Office, by single or double entry? By single entry. The nature of our accounts is peculiar, and I somewhat doubt if they could be kept by double entry.
29. *By the Chairman*: At the present time are there any accounts in arrear that have not been audited? Yes.
30. During what period have those arrears been standing over? Perhaps not above two quarters; and perhaps it is right to say, that that arises in some measure from the queries that are sent to us upon the accounts, and which sometimes give a little trouble, as to the explanations to be given. Of course, they cannot complete their audit until these queries are answered. In other cases, again, perhaps four or five quarters back, on re-examination of the accounts, fresh queries are received upon them. I could not tell you, without reference, to what period any of the quarters are finally audited.
31. Did you receive any letter of instructions from the Commissioners of Customs in England at the time of the transfer of your department to the Colony? There were letters on the subject, but I do not recollect any particular instructions.
32. Have any general instructions been issued by the Colonial Government as to the conduct of the officers of the department since the transfer. No.
33. Was it not customary for the Commissioners of Customs to issue general regulations, from time to time, as to the mode of conducting the business? They seldom made any change as to the mode of conducting the business, but we had printed instructions as to how the duties were to be carried on.
34. No such instructions have been given since the matter fell into the hands of the Colonial Government? They have not.
35. You furnished last year a return of the persons employed in your department? Yes.
36. That return was correct up to the time of its date? Yes.
37. You can easily furnish an additional return shewing the alterations that have taken place since that return was made? Yes, with great facility. (*The witness handed in the same. Vide Appendix A.*)
38. In what way are the hours of attendance at the Custom House regulated? They were regulated by instructions from the Lords of the Treasury, and we have continued to follow those instructions. In the indoor department the hours are from ten o'clock till three, according to the Treasury instructions, but the office is seldom or never closed before four o'clock, and the generality of the clerks are there about half-past nine. The original instructions fixed the hours from ten till three, which are the hours throughout all the British Colonies.
39. *By Mr. Lord*: The office is closed to the public at three o'clock? We do not close it, but we are entitled to do so.
40. *By the Chairman*: You are not bound to keep the office open after three o'clock, according to these regulations? No.
41. And it is under those instructions you now act? Yes; we follow the rules we have always hitherto followed.
42. What are the proper duties attached to your office? The superintendence of the whole department; carrying on the correspondence; receiving people—which, in fact, is almost the greatest portion of my duty—people who come on references made to me, sometimes to settle disputes between them and the officers of the department, at other times for instructions how to act under particular circumstances; the taking of bonds; signing of clearances; and a variety of other matters.
43. Who is the person who receives the money of the Customs' Department? The second Clerk, or Cashier, Mr. Maddocks.
44. I suppose he is specially employed for that purpose? Yes; it occupies his entire time, I may say—that and taking certain bonds.
45. To whom does he account for the receipt of the money? Of course he accounts to me. Every Saturday he produces his book shewing the sum total of the money received, in order that I may draw a cheque to hand it over to the Treasury.
46. *By Mr. Irving*: Does he keep an account at the Bank? No, I keep the account at the Bank.
47. It is paid in to your credit? It is paid in to my credit, daily.

48. *By the Chairman:* And on Saturday you check the account? Yes. We used to pay the money over to the Colonial Treasury every Monday, and it was a much more convenient plan than the present one, which was adopted on the suggestion of Mr. Merewether, the then Auditor General. We now pay on the days on which the Auditor General strikes his balances—the 7th, 15th, 23rd, and the last day of the month. When we paid on Mondays we did not include the receipt of the day; but the previous Saturday's receipt.

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49. *By Mr. Irving:* You closed with the previous week's receipt? Yes.

50. What became of the money during the week under the old plan? It remained in the hands of the Bank.

51. You paid it in daily? Yes. Formerly, when I first arrived, I only drew out the money once a month, but now I draw it out in the way I have just described. Formerly, I only paid the Treasurer once a month; now I pay the money four times a month.

52. *By the Chairman:* In what way are the accounts of the Cashier checked? In a variety of ways. The moneys received are entered in the Collector's cash book at the time they are paid; and at the end of the day, the cash is carried to the Bank and lodged to account of General Customs' Revenue. These moneys are paid by Bills of Entry in triplicate. One is kept by the Collector; a second is sent to the Landing Surveyor, who enters the amount in his cash book, and each day that cash book is compared with the Collector's cash book, whereby, if any error is made, it can be immediately corrected. But there is a further check, and that is by the third Bill of Entry, which is sent to the Landing Waiter as his warrant for the landing of the goods on which the duty has been paid, which bill comes back with the Landing Waiter's book when the vessel is discharged, to the Jerquer at the Custom House, who re-calculates the duty and certifies to their correctness. At the end of every seven or eight days, a further comparison is made by the different rates and amounts of duty being entered in separate Abstracts, and the sum total paid over to the Colonial Treasurer, one of whose receipts is kept by the Landing Surveyor. The different accounts are checked by examination; for instance, the imports are checked with the Warehouse accounts, to see that the duties on all the different articles delivered from the Warehouse have been paid; and then again there is another check on the exports, to see that nothing has gone out that has not been accounted for in the Warehouse.

53. *By Mr. Irving:* Whose duty is it to check these accounts? It is the duty of the Warehouse-keeper; and the clerk's who keeps the import and export accounts.

54. I understood you to say that they entered in their books, each of them, the bills of entry passed for the goods—but is it their duty to go to the Cashier, and say "we want to examine your books, and see that they are correct"? No.

55. Whose duty is it to examine the two books, the clerk's and the Cashier's, to see that he has accounted for all the moneys that have been paid over to him? It is the duty of the Landing Surveyor and the Chief Clerk, not of the Cashier; he does not take any part in that. There is his book which is balanced daily, and which I look over to see that all is correct—that he has received the whole of the duties; and I, of course, lodge these duties daily in the Bank, and draw them out as I have said. No mistake can arise, except upon a miscalculation, with regard to an entry.

56. Suppose four people pay the duties on different importations, to whom do they pay the money? To Mr. Maddocks, the Cashier.

57. The same entry is made by another party, as I understand you? No. If you wish to take anything out of bond, or to pay the duty on anything landing from the ship, you may pass the entries yourself, if you think proper, but a Custom House Agent is generally employed; he draws out three bills of entry at once for the goods—one is written in words at length, the other two in figures.

58. Whose duty is it to take that entry on the part of the Customs? Mr. Maddocks'; the three entries are presented to him at the time the duty is paid.

59. Who receives the money? He receives the money; he ascertains that the calculations are correct, and, having done so, he signs the documents, and gives one to the party, that he may go to the Warehouse-keeper, who then gives a locker's order for the delivery of the goods if they are in bond; if on the ship, it is taken at once to the Landing Waiter, who then allows the goods to go.

60. Will you explain the check on the Cashier? As soon as these entries are laid before him, and the money paid, he signs them, and immediately enters them in his book; they are all numbered from the beginning of the month from one to several thousands, and, therefore, no intermediate entry could be put in; nor could any be abstracted, in consequence of the numbers. The main check is that the Landing Surveyor keeps a book of his own from these entries, and at the end of the day, or the next morning, at any rate, these two books are compared.

61. *By the Chairman:* By whom? By the Landing Surveyor and Chief Clerk.

62. *By Mr. Irving:* Was any one appointed to check these books? No. The Chief Clerk looks over them every day, but he has not been officially appointed to check them.

63. *By the Chairman:* What are the duties of the Chief Clerk? They are very considerable; He overlooks all the other clerks in the office; conducts the correspondence, although, in some special cases, I myself draw the rough drafts of the letters, but by no means always, and he drafts those that I do not; he keeps the imprest cash book, or ledger, in which all the moneys other than duties are entered, and all the moneys paid, separately from the other books I have alluded to.

64. I presume the ledger, or imprest book, is kept on a plan directed by the Lords Commissioners of Customs? Yes, on the same principle; but I may say it is an improved plan; for, formerly, the Cashier not only kept in his book the account of duties received, but he kept, also, on the other side, an account of the imprests, and the payments made. That, however, was found eventually to lead to a great many mistakes and inconveniences, and it is now separated, the Chief Clerk, Mr. Llewellyn, keeping that account taken from the Cashier; he

Lt.-Col. he keeps the account of the imprests issued by the Treasury to me, and also the whole of  
 J.G.N. Gibbes the expenditure. But the books can, of course, be sent, and they will afford a more satisfactory  
 explanation.

26 Nov., 1856.

65. I presume you could furnish the Committee with a return of the gross amount of Customs duties received since the first of October, 1852, shewing also the cost of collection. Yes. (*The witness handed in the same. Vide Appendix B.*)

66. What are the duties of the Landing Surveyor? He is the head of the waterside department, and he has the overlooking of all the officers of that department, viz., the Landing Waiters, Coast Waiters, Lockers, and various other persons; he has to go round to the different ships and warehouses to see that they are all present in the due performance of their duties. Besides keeping the cash book I have alluded to, he has, to a certain extent, to settle all disputes that arise on the spot; if any difficulty arises with regard to the landing of goods, a messenger is sent to the Landing Surveyor, and he goes and rectifies any mistake or any difficulty, and if that cannot be done it is, of course, referred to me.

67. Has he the control of the Tide Waiters? No; they are under the Tide Surveyor. He has the control of the Lockers as well as the Landing Waiters, and, in short, the superintendence of the Bonded Warehouses. The truth is that he has more to do than any individual can do properly. I could give you a list of the duties of the different branches, but such list will not give a perfect idea of the work to be performed. (*The witness handed in the same. Vide Appendix C.*)

68. From your long experience, do you think the expense of collection could be reduced in any way? I do not think it can much. There are two officers that are no longer necessary, certainly—the Baggage Searchers. These appointments arose from a representation to the Governor General, in Sir Charles Fitz Roy's time, from some highly respectable party, that a great deal of smuggling was carried on by means of the baggage of passengers coming from California; and there was a particular case in which a very large quantity of tobacco was got ashore in that way. In consequence of this, two Baggage Searchers were appointed—one for Darling Harbour, and one for the Circular Quay; and for a little time they were found very useful; but there is nothing of that kind going on now, that I am aware of.

69. *By Mr. Buckley*: Is it likely to be commenced again in the event of their being dispensed with? No; because there is not the same amount of communication with California now, nor are the passengers who come from there of the same class as before.

70. *By the Chairman*: The Sub-Collector at Albury has been discontinued? Yes; the Customs' establishment there is broken up.

71. And the establishment at Watson's Bay is broken up? Yes; it was broken up at my suggestion.

72. How are the Tide Waiters appointed? By myself.

73. How are they paid? They are paid as they work; if they are not employed they get no money, but as long as they are employed they get twelve shillings a day. They remain on board ships to see that nothing is taken out of them without my warrant. There are four Tide Waiters, called established Tide Waiters, who were appointed by the Lords of the Treasury. The other men are called extra Tide Waiters, from the circumstance that they are only employed when actually required.

74. *By Mr. Buckley*: Are there many persons employed in the same capacity at the out-ports? At Newcastle there is one, and one at Moreton Bay; but in consequence of their being, as I have said, on the system of no work no pay, their names do not appear on the list of the establishment.

75. *By the Chairman*: Who pays them? I pay them, as I pay the rest of the department.

76. Is their pay made a charge on the shipping? No; there is no charge on the shipping, unless they exceed a certain number of days, and then the charge falls upon the shipping.

77. *By Mr. Buckley*: Is there any extra charge in the event of their exceeding the number of hours allowed for unloading by the regulations? Not to the Government. There is a charge made for extra time.

78. To whom does it go? The Landing Waiter gets one shilling an hour on each £100 of his salary; for instance, if a man has £300 a year he gets three shillings an hour for his attendance during his own time, that is, either before nine in the morning or after four in the afternoon.

79. That is his perquisite? Yes; it is allowed regularly by the Board of Customs, under the authority of the Lords of the Treasury.

80. It does not come under cognizance of the department? Not exactly, but the ships cannot discharge, or the officers attend, at extra hours, without my permission.

81. *By the Chairman*: Are the Tide Waiters paid in the same way in England? Yes.

82. Are none of them paid by salary? None here. Some of them at home have £5 a year as salary. I cannot exactly state it as a fact, but I believe the highest pay to any Tide Waiter in England is £30 a year. At Liverpool and London the Tide Waiters are divided into classes; the higher class receive as much as £30 a year, and it varies down to £5; but at my own port in England, no Tide Waiter received more than £5 a year as salary.

83. What are the duties of a Tide Waiter? His duty is to guard against smuggling. He receives a copy of the manifest of the ship, and enters it in a book, which he keeps for the purpose; all the goods are entered therein, and these he ticks off with the pen when they go over the side of the ship.

84. He is under the control of the Tide Surveyor? Yes.

85. Do you think the Tide Waiters are of any use in checking smuggling, bearing in mind the pay they receive? Yes, I do. The men employed here are a very superior class to those in England. The Tide Waiter's pay in England is only two shillings and sixpence a day.

86. Have any regulations been issued for the guidance of these Tide Waiters? No printed regulations, but when they are appointed the Tide Surveyor explains to them the nature of  
 the

the duties they are expected to perform; and, in fact, they are generally put on board at first with another Tide Waiter, in order that they may learn the duty. No doubt it is an exceedingly idle berth, but it is one, to my mind, absolutely indispensable. Perhaps I cannot better explain it than by saying, that in England every ship has two Tide Waiters put on board to keep watch and watch, night and day, and to every ship there is a Landing Waiter; now, here, my Landing Waiters have sometimes five ships at the same time to take charge of, and we only board single from economy, but of course that man cannot keep watch night and day—he goes to bed at night—but still we have had instances of his being disturbed in the night and finding something wrong going forward. In England the Landing Waiter keeps a book to mark off everything that goes over the side, but no man can keep five books, as would be necessary in the case I have alluded to, for to do so he must see every package come out of the ship before he can tally it off in the book. I have thought well of it, and if you do away with the Tide Waiters you must have a Landing Waiter to each ship, which would be certainly much more expensive, as their salaries range from £200 to £400 a-year.

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87. Are Tide Waiters put on board all ships, or only on board ships having dutiable articles on board? Generally speaking, they are put on board every ship at starting; but in some cases, as, for instance, vessels with cargoes of timber and flour, they are withdrawn, after the Tide Surveyor has made a proper rummage of the ship, and examined the account of the stores, and found that it tallies with the stores in the store-room.

88. Is it the duty of these Tide Waiters, where there are dutiable articles on board, to seal the hatches at night? No, we never do.

89. Is not that done in England? Very seldom, I think. Of course, as I have been here so many years, I cannot speak positively. At Hobart Town it is done, because the cove there is so small that an officer can go round every night and seal the hatches, and then they have no Tide Waiters. It is, after all, in my opinion a very uncertain way of securing the revenue, for the generality of ships have some means of access to the hold from below.

90. *By Mr. Buckley:* Have the parties who are appointed Tide Waiters generally respectable references? Most of them have.

91. *By Mr. Lord:* Their hours are from ten to four o'clock? Yes; but they sometimes unload till six, and they then receive pay at so much an hour, as I have mentioned before. But I have, in a great measure stopped the unloading till six, and made it five o'clock, because the parties interested differ so much in their views on this point; of course the agent of the ship wishes the working hours to be prolonged as much as possible, but the consignees are anxious to have them concluded sooner, for fear of having their goods left on the wharf all night.

92. *By the Chairman:* The Tide Waiter is generally fed by the master of the vessel, is he not? He is, but it is not obligatory. According to law the master of a ship is only bound to find the Tide Waiter with a proper place to sling his hammock; but it has always been the practice here to give the Tide Waiter two or three meals a day; in fact they would be starved if it were otherwise, for they are not permitted to leave the ship even for ten minutes.

93. Some cases have occurred, I believe, in which you have dismissed them for doing so? I have dismissed several for that reason.

94. Have you been compelled to dismiss any of the Tide Waiters or Landing Waiters for being intoxicated on duty? I have, the former.

95. Many of them? Not many, perhaps two or three. I have let it be understood, that if any man is reported to me as being intoxicated on board ship, he will that moment be dismissed.

96. *By Mr. Irving:* In any case, have you taken back a man after having dismissed him for that cause? There was one man who had not been exactly dismissed for drunkenness, but for neglect of duty, and I did restore him, after being exceedingly teased to do so; however, he was afterwards found to be drunk on board ship, and I dismissed him finally.

97. *By the Chairman:* Who regulates the practice in the long room at the Custom House? I may say I do myself entirely.

98. Have any written instructions been given to the clerks? None from the Local Government; and it was rather a strange thing, that when we were turned over to the Colony the Board of Customs desired me to send back every man's instructions. These instructions were in printed books; they have them in thousands, in fact, in the London Custom House, and they are issued to each officer, according to his grade. When the Customs' here were handed over to the Local Government these instructions were called in by a direct order.

99. *By Mr. Buckley:* Did you retain any copy of them? I think I may have some copies.

100. *By the Chairman:* You say the long room is regulated by yourself? Yes.

101. I suppose it is immediately under the Chief Clerk? Yes, it is under his general superintendence.

102. What is the latest hour for receiving money at the long room? The hour for ceasing to take money is half-past two, for this reason, that it takes the Cashier at least half an hour to make up his account, and the Bank will not take the money after three o'clock. The Cashier does not go away until half-past three or four o'clock.

103. In what Bank do you make your deposits? For many years past we have placed all moneys in the Bank of Australasia; but by a recent order, since Responsible Government has been established, the Bank has been changed for the imprest account, which money is now deposited in the Australian Joint Stock Bank. The Revenue is still lodged in the Bank of Australasia.

104. Do you not think that any of the Banks, in dealing with a public office like the Customs, would receive the money at any time before four o'clock? No; they will receive the money, but they will not give a receipt, nor will they carry it to account; they will not be responsible for it.

105. At what hour do the Bonded Stores close? Four o'clock?

- Lt.-Col.  
J.G.N. Gibbes  
26 Nov., 1856.
106. Do you not think great inconvenience may arise to a person wishing to take out bonded goods if he cannot pay the duty up to the time when the stores close? It is his province to take care to come to the Custom House and get an entry passed for whatever he wants in time.
107. Would it not afford additional facility to the public if the money could be taken, say up to three o'clock? No doubt it would.
108. *By Mr. Irving:* Do you find practically that the hours for receiving money are too short for the public? I do not think so in a general point of view. It frequently happens on Saturdays that after the Cashier has closed his account, money is tendered in payment of duty, and in such cases I always take it personally; but it is not carried to the account of that day, it is made the first entry for the following day.
109. *By Mr. Buckley:* Do you think any advantage would be derived by the public in the event of the hours being extended? There might be some advantage in a few isolated cases, but not in a general point of view.
110. *By Mr. Egan:* Has it not been the case that persons have been there at a quarter to three o'clock with their entries and their money, and upon their presenting it, it has been refused? It may have been the case.
111. Do you not think great inconvenience may arise in cases where teams may be detained for want of goods which cannot be had on account of this rule? In all cases of that kind where it is shewn to me that inconvenience will arise, I always take the money myself, to prevent teams being detained.
112. Could not the course adopted by you in these cases be followed by the Cashier in the long room, as a general rule? No, because the money taken after the proper hour would lead to confusion in the Cashier's accounts. There is a great deal of difficulty in that way.
113. Do you not think that one out of the number of Banks might be found to receive the money, and carry it to account at a later hour, for the sake of the balances? I am not at all prepared to give an answer to that question, but my idea is, that it is of no great value to the Bank; I do not see that one week's receipt can be of any material consequence to the Bank.
114. You always keep a large amount in the Bank? Yes, but only for six days; we lodge £1,000 to £1,200 a day, perhaps.
115. There is never less than £1,000 and there may be £10,000? Yes, seldom less than £1,000.
116. *By the Chairman:* Are there any rules for promotion in your department? In most of the Government Departments the clerks have been classed, and they get a yearly increase of salary, according to their class, but they have never been classed in mine, and the salaries are therefore fixed. However, the junior clerk is usually as respectable a man as the senior, or at all events is supposed to be so; and I have made it a rule, whenever a vacancy occurs, to promote from the bottom to the top. I do the same with all the officers of the department. If the office of senior Landing Waiter becomes vacant, I recommend the next to step into his shoes, and so on down to the bottom, leaving only a small appointment to be filled.
117. Is there any regulation with respect to superannuation allowances—is there not something of the sort in the case of those appointed, like yourself, by the Lords of the Treasury? We are all entitled to superannuation from England, not from this Colony.
118. Is there any regulation on that subject in this Colony? No, I believe not. If a Colonial appointment has been sanctioned by the Lords of the Treasury, the holder then becomes entitled to superannuation. But I believe none is allowed for any period of service within ten years.
119. Since Responsible Government has been introduced, no alteration has taken place in the appointment of clerks? None.
120. *By Mr. Buckley:* What course is generally pursued when an officer obtains leave of absence, say for two years? The officer going on leave receives only half his salary, the other half being given to the party who acts for him; and if that party is in the department, he again gives up half his own proper salary to the person who acts for him.
121. Are you aware whether in any of these cases there has been any understanding between the parties, different from the regulation? It has not come to my knowledge.
122. *By the Chairman:* Are there any official regulations with reference to the appointment or promotion of officers in your department? No, none.
123. There is a rule in England, I believe? In England it is very different. Everything is done by the Board of Customs themselves. The Custom Houses are so numerous and extensive there, that men are taken out of one establishment to fill vacancies in another.
124. Are you aware whether that is done by the Treasury in England? No; I think it is done by the Board of Customs.
125. At all events the Board has a veto? Yes.
126. *By Mr. Egan:* If an officer obtains leave of absence, do you ever fill his place by some person not connected with the department? No; the duties are generally performed by the next in rotation.
127. Granting leave of absence does not increase the expense to the Government? Not at all.
128. *By the Chairman:* You sometimes regulate the promotion by the merit of the officer? Yes; but, in the upper branches, I have generally followed the rule of seniority.



## APPENDIX A.

## A RETURN of the Persons employed in the CUSTOMS' DEPARTMENT.

NAME OF THE PARTY.	WHEN APPOINTED TO THE CUSTOMS' SERVICE OF THIS COLONY.	NATURE OF OFFICE.	BY WHOM APPOINTED.	SALARY. (Temporary increase included.)			LENGTH OF SERVICE IN THE CUSTOMS' DEPARTMENT, NEW SOUTH WALES.	
				£	s.	d.	Years.	Months.
John George Nathaniel Gibbes .....	1 May, 1834 .....	Collector .....	Lords of the Treasury .....	1,200	0	0	22	7
Frederick Garling .....	12 September, 1827 .....	Landing Surveyor .....	do. ....	575	0	0	29	3
William Norman Llewellyn .....	6 January, 1842 .....	Chief Clerk .....	{ Originally appointed by the Lords of the Treasury, present ap- pointment made by the Governor General .....	575	0	0	14	11
John Halford Maddocks .....	15 February, 1843 .....	2nd. do. and Cashier ..	do. ....	575	0	0	13	10
Henry John Rucker .....	16 January, 1849 .....	3rd. Clerk .....	do. ....	400	0	0	7	11
Stewart Marjoribanks Mowle .....	8 September, 1852 .....	4th. do. ....	Governor General .....	350	0	0	4	3
Osborne Homersham .....	16 September, 1839 .....	5th. do. ....	do. ....	300	0	0	17	3
Thomas Fancourt .....	20 December, 1847 .....	6th. do. ....	do. ....	275	0	0	9	0
Charles Henry Manton .....	16 January, 1853 .....	7th. do. ....	do. ....	250	0	0	3	11
Wallace Adam Ring .....	18 January 1854 .....	8th. do. (Acting) .....	do. ....	165	0	0	2	11
William Edward Rogers .....	22 September, 1854 .....	9th. do. ....	do. ....	225	0	0	2	2
Richard Kelly .....	17 January, 1854 .....	10th. do. ....	do. ....	220	0	0	2	10
John Hagley .....	26 May, 1853 .....	11th. do. ....	do. ....	220	0	0	3	3
Arthur William Rolleston .....	12 September, 1849 .....	First Landing Waiter....	{ Originally appointed by the Lords of the Treasury, present ap- pointment made by the Governor General .....	400	0	0	7	3
John Bramwell .....	19 January, 1843 .....	2nd. do. ....	do. ....	350	0	0	13	11
Percival Hindmarsh .....	6 August, 1850 .....	3rd. do. ....	do. ....	350	0	0	6	4
Alexander Soutar .....	16 April, 1842 .....	4th. do. ....	do. ....	300	0	0	14	7
Charles Muddle .....	11 October, 1838 .....	5th. do. ....	Governor General .....	300	0	0	18	2
John Kidd .....	8 September, 1839 .....	6th. do. ....	do. ....	300	0	0	17	3
John de Courcy Bremer (absent on leave) ..	28 February, 1846 .....	First Tide Surveyor .....	{ Originally appointed by the Lords of the Treasury, present ap- pointment made by the Governor General .....	350	0	0	10	9
duty performed by								
*James Stewart .....	19 February, 1853 .....	(Acting) do. ....	Governor General .....	290	0	0	3	10
James Collier .....	6 January, 1841 .....	2nd. do. ....	{ Originally appointed by the Lords of the Treasury, present ap- pointment made by the Governor General .....	350	0	0	15	11
David Nash .....	13 January, 1828 .....	Warehouse-keeper .....	do. ....	400	0	0	23	11
Henry Anderson .....	29 December, 1845 .....	First Locker .....	Governor General .....	300	0	0	10	11
John Entwistle Turner .....	19 September, 1849 .....	2nd. do. ....	do. ....	275	0	0	7	3
William Carron .....	26 April, 1848 .....	3rd. do. ....	do. ....	250	0	0	3	7
Arthur Edenborough .....	13 April, 1848 .....	4th. do. ....	do. ....	230	0	0	8	7
Thomas Barwick Corbett .....	6 July, 1849 .....	5th. do. ....	do. ....	220	0	0	7	5
William King .....	26 November, 1852 .....	6th. do. ....	do. ....	220	0	0	4	0
William Hunt .....	12 July, 1852 .....	7th. do. ....	do. ....	215	0	0	4	5
Denis Burke Garvan .....	5 April, 1850 .....	8th. do. ....	do. ....	210	0	0	6	8
Sydenham Snow .....	12 December, 1853 .....	9th. do. ....	do. ....	210	0	0	2	11
Augustus Berney .....	5 February, 1855 .....	First Coast Waiter .....	do. ....	250	0	0	1	10
William Richard Templeman Passmore .....	22 August, 1853 .....	2nd. do. ....	do. ....	250	0	0	3	3
William Warburton .....	19 January, 1841 .....	3rd. do. ....	do. ....	250	0	0	15	10
George Norton Russell .....	1 July, 1838 .....	First Tide Waiter .....	{ Originally appointed by the Lords of the Treasury, present ap- pointment made by the Governor General .....	250.	0	0	18	5
Michael George Brown .....	9 July, 1849 .....	2nd. do. ....	Governor General .....	240	0	0	7	5
Edward Newton .....	23 July, 1849 .....	3rd. do. ....	do. ....	230	0	0	7	5
Thomas Dwyer .....	8 October, 1852 .....	4th. do. ....	do. ....	220	0	0	4	2
Henry George Alder .....	1 October, 1853 .....	Baggage Searcher .....	do. ....	209	10	0	3	2
Nehemiah Rundle .....	5 October, 1851 .....	2nd. do. ....	do. ....	209	10	0	5	2
Sarah Wilkins .....	19 November, 1855 .....	Houskeeper .....	Collector of Customs .....	40	4	2	1	0

\*Mr. Stewart receives half his own salary as Eighth Clerk, and half of Mr. Bremer's salary, during that officer's absence on leave.

APPENDIX TO THE FOREGOING EVIDENCE.

NAME OF THE PARTY.	WHEN APPOINTED TO THE CUSTOMS' SERVICE OF THIS COLONY.	NATURE OF OFFICE.	BY WHOM APPOINTED.	SALARY. (Temporary increase included)	LENGTH OF SERVICE IN THE CUSTOMS' DEPARTMENT, NEW SOUTH WALES.	
					Years.	Months.
<b>SUB-STATIONS.</b>						
<i>Broken Bay.</i>						
Alexander Thomas Ross.....	16 February, 1840 .....	Coast Waiter .....	Governor General .....	£ s d. 275 0 0	16	9
<i>Botany Bay.</i>						
George Brett.....	8 January, 1846 .....	Coast Waiter .....	do. ....	230 0 0	10	11
<b>OUT PORTS.</b>						
<i>Newcastle.</i>						
Charles Bolton .....	1 June, 1837 .....	Sub-Collector .....	Lords of the Treasury.....	350 0 0	19	6
John James Allman.....	11 July, 1846 .....	Landing Waiter(Morpeth)	Governor General .....	300 0 0	10	5
Ewen Macpherson .....	29 September, 1854 .....	Tide Surveyor.....	do. ....	250 0 0	2	2
William Platt .....	31 July, 1856 .....	Clerk .....	do. ....	280 0 0	0	4
<i>Brisbane.</i>						
William Augustus Duncan .....	14 May, 1846 .....	Sub-Collector .....	Governor General .....	525 0 0	10	7
William Thornton.....	14 May, 1846 .....	Landing Waiter .....	do. ....	350 0 0	10	7
Richard Bingham Sheridan .....	7 February, 1846 .....	{Tide Surveyor, More- ton Bay .....	{Originally appointed by the Lords of the Treasury, present appointment made by the Governor General.....}	300 0 0	10	10
Charles Edward Vivian .....	1 February, 1853 .....	Clerk and Locker .....	Governor General.....	220 0 0	3	10
<i>Eden.</i>						
George Plunkett Keon .....	3 January, 1851 .....	Sub-Collector .....	Governor General.....	300 0 0	5	11

APPENDIX TO THE FOREGOING EVIDENCE.

A RETURN of the Persons to whom PENSIONS have been granted for Services performed in the Colony.

TO WHOM GRANTED.	BY WHOM GRANTED.	FROM WHAT FUNDS THE SEVERAL PENSIONS ARE PAID.	LENGTH OF SERVICE.	AMOUNT OF PENSION PER ANNUM.		
				Years.	£	s. d.
John Lohan Deane.....	Lords of the Treasury.....	Imperial Consolidated Fund .....	22	100	0 0	
Charles Neville .....	do. ....	do. ....	20	110	0 0	
*Richard Williams.....	Lords of the Treasury and Government of New South Wales.	{Imperial Consolidated Fund and New South Wales Government Funds.....}	26	125	12 6	

Custom House, Sydney,  
4 December, 1856.

J. GIBBES,  
Collector of Customs.

\*The Lords of the Treasury granted a Pension to Mr. Williams, amounting to ..... £ s. d.  
118 0 0  
The Government of New South Wales granted a further Pension to Mr. Williams, amounting to..... 7 12 6  
Total.....£125 12 6

APPENDIX B.

Lt.-Col.  
J.G.N. Gibbes

A RETURN of the Gross Amount of the Revenue collected by the Customs' Department, from the 1st of October, 1852, shewing the cost of collection during that period, and distinguishing the annual amounts. 26 Nov., 1856.

YEARS.	REVENUE.			COST.		
	£.	s.	d.	£	s.	d.
* 1852 From 1st October, to 31st December.	61,806	16	2	3,507	19	1
1853	354,938	9	6	20,258	9	1
1854	405,720	10	11	26,575	12	0
1855	421,735	9	3	27,178	3	11
1856 For the first three Quarters only.	338,536	10	8	18,646	14	4
Totals ... ..	1,582,737	16	6	96,166	18	5

J. GIBBES,  
Collector of Customs.

\* The total amount collected in the year 1852 was £217,025 5s. 6d.

APPENDIX C.

STATEMENT shewing the Duties performed by the Collector of Customs, and the Clerks in the Customs' Department, Sydney.

The Collector, though so called, does not collect the moneys himself, his duty being the superintendence of the whole of the Department in Sydney, at which Port there are seventy-seven persons under his orders.

He is, according to the instruction of the Board of Customs, to attend in his office at the Custom House from 10 to 3 o'clock; and in cases of emergency, for such further time as may be necessary for the despatch of the current business.

To see that the Officers and Clerks sign an Appearance Book, in the morning and evening of every day, showing the precise time of their arrival and departure, which book is signed according as they arrive, and not according to rank or grade, and initialled by him.

He superintends the registering of all vessels; all bills of sale on transfer of vessels, and all certificates of registry, are declared before and signed by him; all changes of masters are endorsed by him. His office is open at all times, during office hours, to all comers.

He has to decide when registry *de novo* shall take place, and when it cannot; and is repeatedly called on to settle disputes between parties as to titles, &c.

In fact, the greater portion of his time is taken up by references made to him, and by interviews with merchants, and others, on business relating to the Service.

He signs his name four times to all debentures for drawback, which are very numerous. He examines and signs all clearances of vessels, except those coastwise.

He occasionally visits the Bonding Warehouses, to see that the regulations in regard to them are carried out. In fact, superintends the whole business of the Department.

He is, to a certain extent, still retained as an Imperial Officer, under the appellation of Comptroller of Customs and Navigation Laws; and transmits, quarterly, to London, Returns of all Imports and Exports, and of all Shipping.

He prepares at certain times the probable Estimate of Expenditure of his Department, and probable amount of Customs Revenue to be received for the year ensuing—and has, hitherto, been tolerably correct in those estimates.

He receives no pay for his Imperial services, nor does he derive any advantage therefrom in any way.

The Chief Clerk is engaged in carrying on the correspondence of this Department, and in the performance of this duty he has to read all letters on their arrival, and to prepare memoranda for the Collector's information, so that answers may be given to the same. Chief Clerk.

Besides the correspondence with the Principal Secretary's, the Treasurer's, and other Government Offices, and the out-ports, there is that with the Boards of Admiralty, Customs, Light Houses, and with the Board of Trade (Marine Department.)

He keeps the \*Imprest Cash Book, and Seizure Accounts, and Postage Account.

He attends to the Out-Ports. He passes, and pays, all salaries and accounts.

Each cheque which is drawn has to be copied three times, besides the original.

The 2nd Clerk receives the revenue on all dutiable goods, to do which he has to check, examine, and pass all entries liable to duty (which entries are passed in triplicate). 2nd Clerk and Cashier.

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\* Containing accounts of all payments, viz.—Salaries, Drawbacks, and Tradesmen's Bills, &c.

- Lt.-Col.  
J.G.N. Gibbes  
26 Nov., 1856.
- He keeps the Cash Book, into which each entry, with the number, the merchant's name, and the amount of duty, is entered.  
He forwards the Collections to the Bank at the close of each day, to be credited to the Customs' account.  
He receives the Manifests, and other documents, of all vessels arriving, which he examines and compares with the Master's Reports Inwards, after which he takes their declarations.
- 3rd Clerk.
- The 3rd Clerk has to record Bills of Sale in the Book of Ships' Registers; and he prepares the Declaration and Bond before a Register is granted; he then makes out the Certificate of Registry, enters it in the Register Book, makes a copy of the Certificate for the Commissioners of Customs in London. He keeps a copy of all Transfers, Mortgages, Re-assignments, &c., and Changes of Masters, in a book kept for that purpose; records them in the Register Book, and endorses them on the Certificates of Registry.  
He prepares a monthly account of Transfers of Property and Endorsements of Changes of Masters, for the Commissioners of Customs; he also prepares a list of all Certificates of Registry that have been granted and cancelled at this Port, once a month, which is forwarded to the same authorities.  
He writes letters to the different Ports of Registry on any change of ownership or masters, and he enters in Register Book all changes of masters.  
He keeps a Return of all Steamers, and forwards every half year a copy (in duplicate) for transmission to the Secretary of State.  
He also prepares the following Returns and Accounts:—  
A Return of vessels built and registered during the year.  
An Account of the number of vessels belonging to this Port which have been registered, with their tonnage, and the number of men and boys by whom they are usually navigated, distinguishing such of them as have been lost, broken up, or otherwise destroyed, sold to foreigners or registered *de novo*—this account is forwarded to the Commissioners of Customs once a year.  
An Account of Gold Exported—a Return of which is forwarded (in duplicate), once a quarter.  
A Return of all Boats licensed.  
The number of vessels registered in this Port for the last year (1855) was 132; the number of transfers of property, mortgages, re-assignments, &c., for the same time was 273.
- 4th Clerk.
- The 4th Clerk keeps the Export Journal, containing an account of the goods shipped on all vessels outwards.  
He examines and passes all drawback Debentures, and certifies to their being correct.  
He keeps a Quarterly Statistical Return of all goods exported, a copy of which is forwarded to the Customs Department of London; and he also compiles the Return of Exports for the Blue Book once a year.  
He prepares the Revenue Returns for Audit Office and Treasury.
- 5th Clerk.
- The 5th Clerk compiles the Quarterly and Annual Returns of Imports.  
These Returns are of the most troublesome description; every item has to be taken out of each entry separately.
- 6th Clerk.
- The 6th Clerk checks all the entries that have been passed with the Ships' Manifests, both duty and free, averaging 5,000 a month; and he sees that every thing is accounted for in accordance with the masters' reports at the time of entering.  
He jerques all the Landing Waiters' Books, together with those of the Tide Waiters; and sees that all the goods reported agree with the papers issued to the different ships at the Ports from which they sail for this place.  
He makes up and labels for reference all the documents of each vessel by themselves.  
He issues all Post Notes for outstanding duties, arising from Prime Entries.  
He keeps the Book of Ships Inwards, and prepares the Quarterly and Annual Returns of them.
- 7th Clerk.
- The 7th Clerk prepares the documents connected with the clearing of all vessels outwards.  
When a London ship clears, an extra Certificate is attached, shewing the Produce of New South Wales.  
He clears all coasting vessels, and compares their transires with the Cargo Books, and he then signs them.  
He numbers, examines, and signs all Export Entries, and enters them in a book.  
He keeps the Book of Ships Outwards, and prepares the Quarterly and Yearly Returns of them.  
He attends to the provisions of the Passengers' Act, 18 and 19 Victoria, cap. 119.
- 8th Clerk.
- The 8th Clerk corrects the Landing Waiters' Gauging Books, Red Books, and Regauge Orders. He also assists the Warehouse Keeper.
- 9th Clerk.
- The 9th Clerk is wholly employed in the Warehouse Keeper's office.
- 10th Clerk.
- The 10th Clerk copies all official letters. He prepares a Monthly Return of Drawbacks, Incidental Payments, and an Account Current; also the Abstracts of Officers' Salaries (monthly.) He checks the Boatmen's, extra Tide Waiters', and Messengers' Abstracts; he also prepares the following Returns:—The Yearly Return of the Officers, Clerks, and others employed in the Department; a Return of the state of the Officers' Securities (yearly); a return of the Duties levied on Articles Imported—in triplicate, yearly, for the Secretary of State.—He keeps up the Indexes, and the Landing Surveyor's Check Cash Book of Collections.
- 11th Clerk.
- The 11th Clerk is wholly employed in the Warehouse Keeper's office.

*A STATEMENT of the duties performed by the Out-Door Officers of the Customs' Department, Sydney.*

Lt.-Col.  
J.G.N. Gibbes

The Landing Surveyor has the supervision of all the Waterside Officers, and he has 26 Nov., 1856.  
Landing Surveyor.  
to apportion the duties of each, and to visit daily the several places appointed for the landing of goods. He has to adjust all Tares; to check the Gauging and Weighing, and to see that the proper duties are charged by the Collector, and to certify to the correctness of the collections. As the Surveyor of Warehouses, he has to visit all the Bonded Stores daily, so as to ascertain that the Lockers are in attendance. He has also to examine the Stowage, and to survey all Ullage or empty casks that are occasionally discovered.

The duty of the Landing Waiters is, to attend to the discharge of the vessels to Landing Waiters.  
which they are appointed, (sometimes 4 or 5 to each officer.) To examine and open any doubtful packages, and detain any articles in them subject to duty, which may have been entered as free. To gauge all spirits and wines, whether duty paid or for Bond, that may be landed on the wharf at which they are stationed, whether from their own ships, or from others which are landed in Lighters. To weigh all tobacco and cigars landed in the same way. To attend to the shipment of all goods for Drawback; if for wine, to gauge it the same as on landing; if sugar or coffee to weigh them. The Landing Waiters also prevent goods from being landed which are not properly reported, and duly entered. On the completion of the landing of each ship's cargo, the Landing Waiter has to forward his Book to the Jerquer for examination, so that all matters connected with the cargo may be adjusted, and that all the Post Entries may be passed.

The Tide Surveyors board all vessels on their entering the Heads; examine the mani- Tide Surveyors.  
fests, and ship's papers; take an account of the name of the vessel, name of the Master tonnage, time of sailing, and where from, with names of passengers, and of Agent for vessel, as required by the Customs' Regulations, and in order to prepare the Shipping Reports on returning to Sydney, for the Governor General, Colonial Secretary, and Immigration Agent. They have to measure all ships for Registry, to allot the ships which are to be boarded after arrival to the different Extra Tide Waiters. To visit some of those vessels every night at uncertain hours, to see that the Tide Waiters are at their posts. To Jerque the ships when discharged, and take off the Tide Waiters. To appoint Officers to take charge of goods to be exported.

The Warehouse Keeper has charge of the Stock Book, in which he records all goods The Warehouse Keeper.  
warehoused, and writes off all deliveries from the same. He makes out Despatch Notes containing particulars of goods shipped coastwise; compares all entries with Stock Book for the correct quantities and strengths, whether for duty, exportation, re-packing, vating, or otherwise. Makes out (with occasional assistance) all Home Consumption Lockers' Delivery Orders from Bond. Endorses applications for samples. Jerques Quarterly Register; gives the marks and numbers for the guidance of the Landing Waiters, which are placed on packages previous to warehousing. He has charge of the keys of the several Bonding Warehouses, which he delivers to the respective Lockers in the morning, and receives them again in the evening. A large amount of work devolves on the Warehouse Keeper's Office, in furnishing information to the parties whose goods are lodged in Bond.

One of these Clerks has charge of the Warehouse Keeper's Register, in which he Clerks employed wholly in Warehouse Keeper's Office.  
records an account of all receipts into, and all deliveries from the Bonded Warehouses, and he also prepares a copy of the book at the expiration of every Quarter for the Audit Office. He makes out an Annual Return of all goods remaining in Bond beyond the time prescribed by Law. He assists the Warehouse Keeper in cases of emergency.

The other Clerk compares the Warehouse Keeper's daily entries with the Landing Surveyor's. He makes out the Lockers Orders for Exportation for deliveries out of Bond, and enters them in Lockers' Day Book, for the purpose of obtaining their signatures thereto. He arranges daily the Warrants, numerically, for binding. He also assists the Warehouse Keeper when required to do so.

The Lockers receive and take an account of all goods brought to the Bonding Ware- Lockers.  
house under their charge, and also see that they are properly stowed: casks of spirits and wine in not more than three tiers, viz., puncheons and pipes on the floor, hogsheads over them, and quarter-casks or octaves on the top, so as to prevent the leakage consequent on pressure.

The Lockers re-gauge and re-weigh all goods for duty; they deliver all goods for exportation and for Home Consumption, and enter the same in the Stock Book belonging to the particular Store from which the goods have been removed. These Officers superintend the delivery of samples in accordance with the Collector's orders.

The Coast Waiters stationed at Broken Bay and Botany Bay, are employed for the Coast Waiters.  
protection of the Revenue.

The duties of the Coast Waiters in Sydney are precisely the same as the Landing Waiters.

The established Tide Waiters attend to the export duty, and frequently to the Tide Waiters.  
shipment of goods for drawback. At times, when the Melbourne steamers are in, and other vessels taking in Bonded Goods, and when, at the same time, there is more than they can attend to, it is necessary to put on duty extra Tide Waiters.

An extra Tide Waiter is boarded on every ship which brings goods liable to duty. Extra Tide Waiters.  
A book is given to him by the Tide Surveyor, in which the particulars of the cargo is entered. His province is to attend to the landing of the goods after a warrant has been issued to him for that purpose, and to tick them off in his book as they are put over the side of the vessel during the hours of discharge, from 9 o'clock A.M., to 4 o'clock P.M. In the event of any dispute or difficulty arising, he applies to the Landing Waiter on the wharf.

He remains on board until the cargo is out, or at any rate for twenty days, at the expense of the Government, after which, should the vessel be a longer time discharging, he is paid by the ship.  
When

Lt.-Col. J.G.N. Gibbes receives no pay. When off duty, which happens sometimes for three and four weeks together, he is called a Day-pay Officer; but as it is impossible to know how many ships may arrive, or at what times, it is necessary to have a larger number on the list than is at all times required for duty.

26 Nov., 1856.

The extra Tide Waiters are mostly respectable men, and generally recommended by persons of standing in the community.

They are not allowed to leave their ships at any time, under pain of dismissal. When relieved, their books are sent to the Custom House, to the clerk called the Jerquer, who compares them with the manifests and cockets, and sees that every part of the cargo has been accounted for, and the duty paid where due.

(Copy.)

No. 30½.

Custom House, Sydney,  
27 February, 1855.

SIR,

I beg leave to acknowledge the receipt of your letter of the 23rd instant, No. 31, and in compliance with the directions contained therein, to transmit herewith a Statement of the Duties performed by the several Clerks and Lockers in this Department.

2. With regard to Mr. Llewellyn's appointment, I would observe, that the best explanation I can give is a reference to the correspondence which led to it, copies of which I enclose.

3. There is but little in a name. He was not appointed by the late Governor General as Secretary; and although I inadvertently called him, in my letter of the 29th ultimo, No. 10., Assistant, "or Secretary," it is in the former light which he stands, and his assistance is most necessary to myself.

4. When such an office was but little required, I had a Comptroller to share with me the labour, but just as business was beginning to increase, that office was abolished throughout the Colonies; and although subsequently, the Board of Customs proposed to re-establish it at this port, the Lords of the Treasury never came to any decision about it.

5. My correspondence with the Government is very insignificant. It is with the shipping interests; with the Merchants of Sydney; with the out-ports of Brisbane, Newcastle, Eden, and Albury, and with the neighbouring Colonies, that the correspondence occupies much time, and so little have I to myself, that I have sometimes been unable to get through a single letter of a morning, from the constant interruption of persons coming to see me on business.

6. In fact, mine is peculiarly an office of reference, and one from which I cannot at any time exclude the public. They come to me to sign Bonds, to make Declarations, to settle disputes between the Landing Officers and themselves; to ask advice, or information how to act in cases of difficulty arising from defective bills of sale; the absence of powers of attorney, the loss of ships' papers, or flaws in documents regarding the transfer of vessels, with various other matters, too numerous to describe.

7. Under these circumstances, it will be seen that there are very many things which must be done, and which I cannot always attend to myself; and experience has shewn, that to give them on one occasion to one clerk, and on another day to another clerk, who may happen to have a little spare time, is anything but a desirable system, and one that would lead, and frequently has led, to serious mistakes and confusion; in fact, it is only a clerk of standing, and with a thorough knowledge of the nature of the service, that can be depended on for such purposes.

8. The statement of Mr. Llewellyn's duties will shew the work he has to perform, the most important of which, perhaps, is the charge of the Imprest Cash Book, which has, since he commenced his present occupation, been separated from the Duty Cash Book (kept by the Cashier), and has proved of the greatest possible advantage, preventing the numerous mistakes which were so often before made.

9. The Lockers are, without doubt, numerous; but instead of reducing them, they will, I fear, require to be increased so long as the stock in hand renders the occupation of so many warehouses necessary. Indeed, the present number was established by the late Governor General, in consequence of complaints from the mercantile community of their weakness, and on the application of the Chamber of Commerce.

10. They are, nevertheless, not sufficient in number, and, for the sake of economy, I have for some time been employing three Tide Waiters to act in that capacity, instead of applying for more Lockers.

11. The inference drawn by His Excellency the Governor General is quite correct; the Warehouses, twenty-two in number, being scattered all over the city—but there was no help for it. The importations in 1853 and 1854 were so great that I was compelled to approve of them, wherever they could be found, every old warehouse being filled to the roof.

12. Wherever it can be done, one Locker attends to two and three Warehouses; but the magnitude and extent of business of eight of them renders it necessary to keep those open all day, and a Locker is consequently necessary for each.

13. Herewith I transmit a Return of the quantity of goods that were in Bond on the 31st December last, although within a few preceding weeks, several hundred casks of spirits, and eight thousand four hundred and sixteen cases of brandy, gin, and wine, had been exported.

14. The Colonial Secretary (Mr. Thomson) knows that I have ever studied economy as to the strength of the Department, and that I at one time carried it so far as to be injurious to myself and prejudicial to the public; and that it was only from absolute necessity that it was increased to what it is now.

15. We have frequently thirty ships discharging at the same time along a margin of water of nearly two miles, and to attend to them I have six Landing Waiters and three Coast Waiters (Landing Waiters upon inferior pay); whilst at Liverpool, Glasgow, Hull, and other large Ports in the United Kingdom, the same number of vessels would have thirty Landing Waiters to take charge of them.

16. When I arrived here, twenty-one years ago, the Customs' Revenue was considerably under £100,000 a year, and we had then four Landing Waiters, four Clerks, and one Locker. In 1841 it amounted to £178,921, and there were six Landing Waiters, seven Clerks, and four Lockers. Now, the Revenue is about £400,000 a year, and we have twelve Clerks, nine Landing Officers, and nine Lockers, being an increase only of five Clerks, five Lockers, and three Landing Waiters, in fourteen years.

17. Whatever may be the number of Tide Waiters, it makes no difference to the Government, as they are only paid when occupied.

On my arrival in 1834, there were ten, and until the end of 1852 they never exceeded fourteen.

In 1853 I was obliged to increase them to forty-four, all of which were constantly boarded.

Last year, when a reaction took place, I reduced them to thirty, and they are now fully employed.

18. In the promotion recommended by me, it will be observed that one clerk is proposed to be reduced.

19. I trust that I shall be excused for the length of this letter, but I think it better to give at once all the details I have given, for the information of His Excellency the Governor General, and trust that it will shew him, that although the Department is numerous and expensive, it is not more so than the trade of the place, and the due protection of the Revenue requires.

I have, &c., &c.,

The Honorable  
The Colonial Secretary.

J. GIBBES,  
Collector of Customs.

FRIDAY, 28 NOVEMBER, 1856.

Present:—

MR. BARKER,  
MR. BUCKLEY,  
MR. GORDON,

MR. HOLT,  
MR. NICHOLS,  
MR. WEEKES.

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

Lieutenant-Colonel J. G. N. Gibbes, Collector of Customs, called in and further examined:—

- 1. *By the Chairman:* I believe you are the authority for licensing Custom House Agents? Lt.-Col. J.G.N. Gibbes  
I am. 28 Nov., 1856.
- 2. Upon what principle are these persons licensed—by any rule or regulation? By law.
- 3. Are they licensed in pursuance of the Act of Council regulating the Customs Department? They are.
- 4. In what way are the licenses issued to them? They enter into a bond, when they apply to be made Custom House Agents, of £200, with one surety for their good behaviour, and binding them to do what they can for the due protection of the revenue, and to render every assistance in their power to keep things straight and in order.
- 5. Are they furnished with apartments at the Custom House? Some of them are.
- 6. Do they pay anything for the privilege? Nothing.
- 7. Neither for the license nor for the occupation of these apartments? Neither the one nor the other.
- 8. Are you aware whether any of them carry on their own private business as Shipping Agents, or Commission Agents, or anything of that sort in the Custom House? I did understand that on one occasion it was done, but I put a stop to it as far as the House was concerned. The Custom House Agents in London are not found in any accommodation of that sort.
- 9. I suppose it arose from the necessity of the case in this Colony? It did. There is a large room appropriated to their use in the London Custom House, without any other accommodation than a sloping desk running round the room, with inkstands in it. Sometimes there are as many as thirty or forty of them present in this room, performing the business of their clients.
- 10. You license the Bonded Warehouse-keepers also? Yes.
- 11. Do they enter into any bond or give any security? Not any.
- 12. In what way are they licensed—in pursuance of the Act of Council? Yes.
- 13. They make application to you and you grant it or not, as you think fit? Yes, according to the state of the port. The present number of Bonded Warehouses arose from the extraordinary state of trade a few years back, when, owing to the immense quantity of goods imported, we were glad to take any store we could get.
- 14. Do they pay anything to the Government? No.
- 15. It is proposed to put some tax upon them? Yes.
- 16. Do you think that is a proper mode of proceeding? I do.
- 17. Do you think Custom House Agents should pay a fee? I do not think so, although I think it would be no hardship upon them if they were obliged to do so, for I believe it is a lucrative occupation.

- Lt.-Col. J.G.N. Gibbes  
28 Nov., 1856.
18. Do you think they should pay for the occupation of rooms in the Custom House? I think they should. It would be but fair that they should pay. The only objection to tax them on that score would be that we may want the rooms ourselves, and they must go out at any moment. I have been obliged to remove the principal Custom House Agent from the room he occupied into an inferior one, because we could not do without it. When I say the principal Agent, I mean the one who does the largest business.
19. Are there any instructions issued by you for regulating the mode of conducting business by the Custom House Agents? No.
20. Were there any issued by the Commissioners of Customs? I cannot say that there were; I am not sure.
21. Are there any for the Bonded Warehouses? Yes.
22. By whom were they issued? By the Board of Customs. We still go on as if we were under their orders, although we are now entirely under the orders of the local Government.
23. Are these regulations written or printed? Printed.
24. Can you furnish the Committee with a copy? Yes, I believe I can. (*The witness handed in the same. Vide Appendix A*). We are not as stringent here as they are in England: there they will not allow different articles to be bonded in the same room.
25. You allow spirits, tobacco, and cigars, all to be put in the same bond? Yes.
26. Why is not that allowed in England? Really I do not know.
27. What are the hours for keeping open the Bonded Warehouses? From nine to four o'clock.
28. Are they all open from nine to four? No. I think eight of them are; and the remaining thirteen are open, each, during half the day—some of them from nine to twelve, or perhaps, one o'clock, and others from twelve or one till four; so that the same Locker goes to one store in the morning, and to another in the afternoon.
29. What is the course of proceeding with reference to taking goods into these stores and out of them? There are certain entries passed for stowing the goods in any particular Warehouse.
30. What do you call that entry? An entry for bond. And then the importer enters into a bond that these goods shall not be removed under any other circumstances than the payment of duty upon them, or for exportation. They are then landed under charge of a proper officer and carried to the Warehouse, where they are received by the Locker, who stows them according to the nature of the goods. The rule is not to allow more than three tiers of casks of wine or spirits—the larger casks at the bottom, the hogsheads above them, and the quarter casks above all; and this is perhaps one of the difficulties with regard to a tax on the Bonded Warehouses, if they are to pay by measurement, because possibly half the contents of the store are not occupied—it cannot be under the regulations. But where case gin, or cigars, or tobacco, or any goods of that sort, are stored, of course they are, and can be, piled to the roof.
31. The goods are taken, you say, from the ship, in the custody of one of your officers, to the store, and there delivered to the Locker? Yes, excepting in the case of such a store as that of Messrs. Campbell and Co., which is on the wharf, and the goods are rolled at once from the ship into the Warehouse.
32. Who pays this individual who has charge of the goods during their transit from the ship to the store? The Government. It is for the protection of the revenue, and therefore the Government has to pay.
33. Is there any charge to the owner of the goods? No, none at all.
34. The Government pay the Lockers also? Yes.
35. There is no charge to the Warehouse-keeper for the attendance of the Locker at the store? No.
36. That comes out of the Customs' revenue also? It does.
37. How many Lockers have you? We have nine Lockers to twenty-one Bonded Stores.
38. Are they paid by salary? They are paid by salary.
39. I see in the return made last year their salaries are set down as varying from £110 to £200 a year? Yes.
40. That is without the gold increase? Yes.
41. How are goods taken out of a Bonded Store? By a warehousing entry.
42. And payment of duty at the Custom House? Yes; in much the same way as duty is paid on goods for home consumption when taken out of the ship; the only difference is, that there are four entries when they are taken from the warehouse, and only three when taken from the ship; because the Warehouse-keeper requires to have one to retain in his own possession.
43. Who keeps the keys of the Bonded Warehouses? My Warehouse-keeper; the Lockers bring them to him every evening, and he locks them in an iron chest.
44. Is the proprietor of a warehouse allowed to keep any key? He has one key. Every Bonded Warehouse has two locks—one belonging to the premises, and one to the Customs—so that neither can enter the premises without the other.
45. Have you ever discovered whether there has been any change in the quality of spirits from one cask to another? No; but I have heard of such things. I have been told that inferior brandy has been put into casks with Martell's brand. When a man applies for permission to rack off a quantity of spirits from damaged casks, and the casks selected are of a different or superior brand, it is the Landing Surveyor's duty to see that those brands are erased.
46. *By Mr. Gordon*: Supposing the Locker omitted or neglected to lock the store at night, there would be nothing to prevent the owner from entering then? No.
47. Have you ever heard of such being the case? I cannot say I ever have. I do not recollect that I ever heard of it, and I think I should remember it if I had heard it, because it would be quite necessary to take the matter up in a very serious way.



48. *By the Chairman*: There is no other safety for these goods being kept in the store, except in the way you have described—the Locker having one key, and the owner having another? That is all. Lt.-Col.  
J.G.N. Gibbes
49. So that, by the connivance of the Locker, spirits might be taken out very easily? Cer- 28 Nov., 1856.  
tainly.
50. How could that be discovered? It would be very difficult to discover it. The cask would be found to have a defect in it, of course, and it would be said to have leaked out.
51. Have you ever heard of such a case? No; I have never heard of it. There was one case in Unwin's Bonded Store, in which the cask stood too near the window, which had bars but no shutters, and they contrived to get a syphon in and take away a considerable portion of the spirits. After that I, of course, took care that it should be impracticable to repeat the operation.
52. You never heard of a vast number of casks of rum and other spirits being taken out and distributed in Sydney, and the certificates being burned afterwards? No,—never. There was an immense deficiency in what is called taking stock in Unwin's stores. It was a store excessively damp and bad. The hoops of many of the casks had burst, and the deficiency was accounted for in that way.
53. You say there are two keys kept of these stores—do you mean that there are two different locks? Yes. The usual plan is that the proprietor of the Warehouse keeps the key of the door, with a lock in the interior, and an iron bar crosses that, on which the Locker's lock is put.
54. Does anybody inspect these Warehouses after the hours for locking up, except the Locker? No.
55. You have no Inspector of Warehouses? No; one is much wanted.
56. Why? The duty of looking after these Bonded Warehouses is at present cast upon Mr. Garling, the Landing Surveyor, and any one who would follow him about during the day must admit that it is quite impracticable for one man to do all that he has to do as carefully as it should be done. The consequence is, that he can only occasionally visit the Bonded Warehouses.
57. These are not stock locks that you have on these stores? No. We used to have very superior locks, padlocks, that cost three or four guineas each; but, after all, it was found that they could be broken.
58. They are padlocks at present, are they not? Yes.
59. Did you ever hear of good snuff or cigars being taken out of the cases, and bad tobacco being put in its place? It has never been brought before me. I frequently hear rumours, but when I try to trace them, I can find no ground for them.
60. *By Mr. Holt*: Do you not give permission to open cases of cigars for certain purposes? We only give permission to open them in order that any part of them that may be damaged may be burned.
61. Is it not the practice with some of the merchants to open cigar cases, take the finer descriptions out, and substitute common cigars for them? I can only depend on my Locker; the thing is quite impracticable without his connivance.
62. *By the Chairman*: With reference to spirits, I collect from your testimony that if any deficiency arises there are no means of finding out whether there has been any fraud, because the answer would be that the cask was defective, and it had leaked out? That is the case. Formerly, in England, a certain allowance was made for loss of spirits in bond, principally from evaporation, and however great the actual loss might be beyond the quantity allowed, the owner of the spirits was obliged to pay the duty on it. But such a clamour was raised about it, that a man should not only lose his goods but pay the Crown a duty on that which he never, in fact, could get, that that rule was done away with, and only the actual quantities taken out of bond pay the duty. That is the course pursued here, by law.
63. When these goods are taken into the store are they gauged for quantity? Yes; going in and going out.
64. Are goods such as tobacco and cigars weighed before being bonded? Yes.
65. And weighed again on being taken out? Yes.
66. Is any account kept of the weight or quantities? Yes.
67. Who keeps it? The Custom House Warehouse-keeper. His books shew everything that goes in, and everything that goes out, and the difference between the two.
68. *By Mr. Weekes*: Then you keep an account, in fact, against each of the several Warehouses, giving them credit on one side and debiting them on the other? Yes.
69. If there are any empty casks or staves lying about the stores, are you obliged to be satisfied with any account that may be given of them? Yes; pretty much so.
70. *By Mr. Gordon*: Are they not obliged to keep the marks or brands? Yes, the Locker has to see to that. There is always a certificate for every package. At one time these certificates were made out by my Warehouse-keeper, and were looked upon almost as bank notes; but the Board of Customs, many years ago, gave me authority to do away with them. However, they did not order me to do so, and on conferring with the late Mr. Richard Jones and other mercantile gentlemen, I did not break off giving them at that time. At last I did it, being particularly induced to do so by being threatened with an action for giving up some goods sold at a Sheriff's sale. The party who had bonded the goods threatened, on the strength of my certificate, to bring an action against me for delivering the goods to the party who purchased them.
71. Has any complaint been made to you, or has it come within your knowledge, that some of these Lockers are not very temperate men? I have heard so, but I have never been able to bring it home to them. People mention such circumstances to me, but whenever I ask for proof I never can get anybody even to come forward.
72. Is there no officer of superior standing whose duty it would be to see that the Lockers do attend to their business, and that they are steady and sober? The Landing Surveyor is supposed

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supposed to do it, but his business is, as I have already explained, too extensive to enable him to do it properly; and that is why a Surveyor of Warehouses is so much wanted.

73. *By the Chairman*: Was it ever reported to you that a gentleman, who has lately been pensioned from the Customs' Department, was drunk for years, when in the service? Yes; there was one man named to me, but I never saw him drunk; and I have never been able to induce anybody to come forward to testify to the fact.

74. *By Mr. Weekes*: Does the same practice prevail at home as to Bonding—are all the stores held by private individuals, or does the Queen——? Never. That was what was proposed by a Committee on the Bonding system here, but I do not think it would answer well. During my lifetime it has not been the case in England. It was for a short time the case in Dublin, but that has for years been done away with, and all Bonded Warehouses there are now private property.

75. Do you see any objection to the Government acting as its own Warehouse-keeper? I went into the matter when the Committee sat here very minutely, and I could not see any advantage to be derived from it. A smaller number of lockers might answer, but Warehouses of such magnitude as these Government ones must necessarily be—for there must be one for the Circular Quay, and one for Darling Harbour—would require a vast number of people to attend them. They would have to be divided and subdivided, according to the goods that were to go in each department. And I confess I can see no advantage in it.

76. *By Mr. Holt*: Would there not be a great saving of time in the Lockers not having to run about from store to store—some of the tobaccoists Bonded Stores, for instance, are very small? They only have a Locker when they make a requisition the day before. I have no doubt if a tax were put on Bonded Warehouses, those two would be given up.

77. The Bonded Stores are scattered in all parts of the city, are they not? Yes.

78. It must require a great amount of time for the Lockers to go from one to another—now, could not the Government, by borrowing money at a low rate of interest, building large Bonded Warehouses, and deriving from them the store rent now paid to private individuals, make a large profit on that money? If they did so, they would require an immense number of additional clerks.

79. I cannot see that—you have the whole of the goods to enter now just the same as you would have then; and from what I learn from you there is not a sufficient check upon the Bonded Warehouses now—for instance, could such great deficiencies as those in Unwin's Store have taken place in a Government Store, if you had taken stock regularly? That was the cause of it, not taking stock; and since then we have made it a rule to take stock once a year.

80. *By the Chairman*: Is there any Act of Council regulating these Bonded Warehouses? No.

81. You know that in England there is a Warehousing Act? Yes.

82. They are regulated here by Rules and Regulations? Yes.

83. Who frames those Rules—the Commissioners of Customs? We act under instructions from the Commissioners of Customs, framed under that Act.

84. *By Mr. Holt*: You do not consider the Act in force in this Colony? No, there is no such Act in this Colony.

85. *By Mr. Gordon*: Some two or three years ago, so large a quantity of dutiable goods arrived here that you found a difficulty in getting suitable stores, and that led to all sorts of Bonded Stores being licensed? Yes, we were obliged to take any stores that offered—not but that every one of these stores are stores of a very superior class to those that were in existence when I came here.

86. Do you not think that Bonded Stores distributed through the city in the way these are, are a great convenience to the public? I think so. There might be rather fewer Lockers required if we had Government Stores; but there is no great amount of time lost now. Each Locker has his own store to attend to. In some cases where the store is open all day the Locker goes to it and stays throughout the day. In other cases the Locker goes to one store in the morning, and locks up that at a particular hour, say twelve or one o'clock, and goes to another for the afternoon; so that there is no real time lost by that means at all. In two gigantic Warehouses the question would be how many Lockers would answer the purpose; but there would be the same number of entries to make, and gauges to take, and the public would not like to wait if I had not Lockers enough to meet their demands. I do not think that system would be of any particular advantage, myself.

87. *By Mr. Weekes*: Would there be any advantage in all Bonded Stores being in close proximity to the Custom House? Mainly to ourselves, not to the public. There are not many persons who pass their entries themselves. No person can act as a Custom House Agent without a license, but every merchant may pass his entries by means of his own clerk, though one man's clerk cannot pass an entry for another, under a penalty of £100.

88. Would it not give you a better opportunity of inspection? Yes, it would. The Landing Surveyor would not have so far to go round. The Bonded Stores are not scattered all round the waterside, but some are in the heart of the town; for instance, Mr. Cooper's in George-street, Mr. Griffiths', and various others.

89. *By Mr. Gordon*: It is your opinion that the present system of bonding is an advantage to the public, and that it would be no advantage to the Government to undertake to establish Bonded Stores of its own? I do not think it would.

90. *By Mr. Buckley*: Would it be any advantage to the Government to rent them? I do not think so. I consider that we should have to employ so many additional hands that there would be no saving to the Government, but rather a loss.

91. Is it your opinion that the owners of these Bonded Stores make no profit? They make a very large profit.

92. Supposing the Government were to become lessee of these stores, do you not think it would be an advantage? It might be. I am not altogether prepared to give a direct answer to

to such a question. It would require a great deal of consideration, and a great deal of calculation, to say yes or no.

93. *By the Chairman:* What is the practice when dutiable articles are sent from a Bonded Store to Twofold Bay, and other places coastwise? They are taken out under bond, and go under bond to the port they are sent to, unless it is not a port of entry, and then they must pay the duty here and run the risk of losing the amount of duty, as well as the prime cost, in case of accident to the vessel.

94. *By Mr. Gordon:* They may be taken either way to ports of entry, at the option of the owner? Yes.

95. What is your opinion with regard to the proposed tax on Bonded Stores—do you think it would act equitably? I do, with the exception that I do not think stores open only half the day should pay as much as those which are open the whole day.

96. Is it not within your knowledge that certain stores, in which spirits are bonded, are not half full? Yes. I have alluded to that before. There would be a species of injustice in charging by the cubical contents in such cases.

97. *By Mr. Weekes:* Who signs the certificates now? The occupier of the Bonded Store.

98. Did you ever hear of instances of duplicate sets of certificates being issued and negotiated? I think I have heard of something of the sort. We allow them to be used, but they are not documents that in truth the Customs or the Government have anything to do with now; neither has it been so for years. I have heard of disputes about these certificates being changed, and about rents and so forth; but I do not consider that they were under my cognizance as Collector of Customs, nor were they brought before me officially at all.

99. *By the Chairman:* Do steamers going from here to Port Phillip, and from here to Moreton Bay, pay duty on the spirits they take out of Bond? There is a difference between them. Spirits sent to Melbourne are exports.

100. Do they pay duty for spirits taken out for the use of the ship? No they do not.

101. They get their spirits duty free.

102. You are aware that they sell liquors on board these steamers? Yes. I have often thought of that.

103. Do they take out very large quantities? Occasionally the quantities have been large, but I directed that that should be stopped.

104. Have you ever heard of a quantity of spirits being taken out for a steamer going to Port Phillip, a part of which has been supplied, at the wharf where the vessels were lying alongside, to steamers bound for the Hunter River? No.

105. That might easily be done? It might, except that their clearance shows the quantity taken out for Port Phillip, and when they get there it is the province of the Officer of Customs there to ascertain that that quantity is on board, except what has been used for the passengers and the ship. That is the only check.

106. Have you any idea what quantity they take out for the trip? No, I have not the least in the world.

107. Do you know that they carry spirits, taken out for exportation, as it is called, on their decks? I was not aware of that. It ought not to be the case.

108. That would facilitate smuggling to a very great extent? No doubt.

109. Under that system could not smuggling take place to any extent; for instance, if they called in at any place on the coast, they could easily land a cask of spirits placed on the deck? I think smuggling might take place by means of the steamers, certainly. There was a case the other day in which a steamer in bad weather gave a lurch and stove in the head of a cask of spirits. There were several respectable witnesses who testified to the fact, on an application being made to the Government for a remission of the duty; but the law will not allow any remission of duty unless the accident takes place in the sight of an Officer of the Customs, and therefore the application could not be granted.

110. *By Mr. Gordon:* Is there not an Officer of Customs sent on board the steamers with spirits? Yes.

111. Is it not his duty to see that they are put below? Yes; but we find the steamers extremely troublesome in that respect. The officer, whose time is valuable, cannot wait perhaps while they remove the cask to the hold. In the hurry of taking in cargo he cannot get them to attend to it; and he is apt to go away, taking their word that it will be all right. It is very difficult to deal with these steamers indeed. They expect even greater latitude than is given them, and that is already almost too great.

112. Is there not a certain officer whose duty it is to clear these steamers? No; they are cleared in the same way as other vessels. Those going coastwise, are cleared at eight, nine, and ten o'clock at night. There is an officer specially to attend to them.

113. How is he paid? By them,—5s. for each vessel.

114. Do you not think it would be better to give him an extra salary, and let the fees go to the Government? These things grow up from small beginnings. When the custom was first established, the old Hunter River Company, finding it inconvenient to clear their vessels earlier in the day, applied to me, and said, that if an officer of the Customs were directed to attend at night, they should have no objection to pay the expense, because they were quite aware that an officer's time is as valuable to him as any other person's, and if he has to pass his time on their wharf, he ought to have additional remuneration, while at the same time the Government ought not to be called on to pay for their convenience.

115. *By Mr. Gordon:* Do you find any difficulty in getting gentlemen to undertake the different duties enumerated in the Return of the Strength of your Department made last year, at the present rates of pay. Take the case of the Landing Surveyor, for instance, do you think that officer is sufficiently paid? I represented to the Government that Mr. Garling was very ill paid, and they have given him an increase, with which, I think, he is satisfied.

Lt.-Col.  
J.G.N. Gibbes  
28 Nov., 1856.

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116. *By the Chairman*: What is your opinion as to the general scale of salaries to the officers of Customs? I think that, under the proposed estimate, it is very fair.

117. It is an increase upon the amounts set down in this Return of last year? Yes; that was the scale before the gold increase was given.

118. You think it possible to obtain good service at the rates of salary now proposed? Yes, I think so, generally speaking.

119. The Lockers and Tide Waiters receive very small salaries—do you not think these men are very open to receive presents? They might be, but there is no saying whether they would not be open to receive them if they were better paid.

120. *By Mr. Gordon*: I see the salaries of the Lockers are set down in this Return at from £200 down to £110. Now, looking at the importance of these gentlemen's position, if they really are efficient and steady men, I think the salaries quite inadequate, and I was just about to ask you whether it has ever come within your knowledge, that gentlemen have been appointed to situations in the Customs after they have been dismissed from merchants' offices for being tipsy, and for general unsteadiness? No, I have never heard of that.

121. *By the Chairman*: These men are subject to great temptation, are they not? No doubt of it, and, unfortunately, they are subject to great temptation in another way; they are always obliged to be with their heads over the bung-holes of casks of wine and spirits, and I dare say that in this extremely hot climate, without meaning to commit themselves at all, they do take a little more brandy and water than they ought to do. I have endeavoured to check it as much as possible; and I receive anonymous letters from people making charges of intoxication against particular officers, and saying that they will come forward, but they never do come forward.

122. *By Mr. Gordon*: I think you said you thought it might be desirable for Custom House Agents to pay a small fee—do you know whether it is customary at home for them to pay anything? No, I believe not.

123. *By the Chairman*: Are the charges of Custom House Agents and Bonded Warehouse-keepers regulated by any scale? No; they charge what they like.

124. Is that the case in England? I believe so; I am not sure of that, for I am not acquainted with the practice at the two great ports, London and Liverpool, but at my own port the business was done by the clerks of the merchants, or by my Chief Clerk, who was there allowed to prepare the entries for people, and to receive a shilling for so doing, not by me, but by the Lords of the Treasury.

125. *By Mr. Buckley*: Are the charges made for bonding goods considered excessive? I really do not know. The whole system, I think, is bad; whatever charge one man fixes on, another will offer to do it for less.

127. *By Mr. Gordon*: The supply of goods regulates the price, in the same way as in any other business? Yes. I have heard of goods being taken into a Bonded Warehouse free of every charge for six weeks, as an inducement for parties to go to that bond instead of another. But you cannot control it, for if you were to fix by law a certain price, it would be avoided by the return of a portion of the rent afterwards.

128. *By Mr. Holt*: You think the Government could not interfere as regards their charges? Certainly not.

129. *By the Chairman*: Does any examination of the luggage of persons on board the steamers take place? No, never.

130. Then it is possible for a man to smuggle quantities of dutiable articles with his luggage? I think not. Perhaps a few cigars may be sometimes got ashore in that way.

131. You think it is better that that should be the case occasionally, than that ninety-nine out of a hundred persons should be annoyed without cause? Yes, and I am one of those who think that the amount of smuggling in this port is very small, compared to what many persons think.

132. You do not know how much may take place at Twofold Bay, or other places on the coast? No; but I do not think it is carried on to any extent.

133. Have you anything to do with the Distillation Department or with the collection of duties on Colonial spirits? Nothing.

134. Do you not think that might be placed under the Customs? I hope not. I have a clerk attached to my department, although he does not belong to me, in consequence of that most extraordinary Act, which was brought in by Mr. Abercrombie, to bond Colonial spirits in Customs' Bonded Warehouses, for the purpose of colouring them—in fact, to cheat the public by making them think they were imported spirits.

135. Whatever inconvenience it might be to you, still it would save something to the public to place the two departments under one head? It might; but the distilleries are a long way from us. I apprehend that precisely the same staff would be required, and I therefore see no other saving that could be made than in the salary of the Chief Inspector of Distilleries, and certainly he can attend to the working of that Department better than the Collector of Customs.

136. Do you not think it is right that the management of the Customs and Excise should go together? Perhaps it is; but such is not the case in England.

137. *By Mr. Gordon*: Have you not heard that large quantities of what is called silent spirit have been manufactured into brandy, and sold as Colonial brandy, only paying rum duty? I have heard something of it, but I never heard any particulars; and, of course, Mr. Stirling is the proper man to attend to that. I consider it would, of course, increase my responsibility.

138. *By Mr. Holt*: Would it not be a better check for the public? Perhaps it might; but really I do not feel prepared to answer the question decidedly.

139. *By the Chairman*: Is the entry for free goods very troublesome? No, it is not very troublesome now, because we do not take the wharfage. When Sir William Denison proposed that the system should be renewed of the wharfage being collected by the Customs' Department,

ment, the Circular Quay being taken back into our own hands, I pointed out this objection to it; and I pointed out also that we should never make as much money out of it as was made by leasing, indeed nothing like it. Lt.-Col.  
J.G.N.Gibbes

140. Would there be any difficulty in furnishing a Return of the number of entries of free goods? None at all. If the collection of the wharfage had rested with us, it would have been a most laborious affair, because free entries are separated from other entries, and are made by a different clerk. All that he has to do is, to ascertain that nothing in that entry is liable to duty, and then to pass it, which may occupy him perhaps a minute or two; whereas, if the wharfage had to be collected, it would have taken ten times the number of minutes of time as are necessary under present circumstances. 28 Nov., 1856.

141. With reference to seizures of goods, what is done in case goods are stopped by one of your officers? If he is an officer who has not power to seize, he has to go to some officer who has; but if he is an officer who has power to seize, he seizes the goods at once, and lodges them in the Queen's Warehouse, and sends in an account of the circumstances to me, explaining why he has seized them. If it is a case which I think frivolous or vexatious, I order the goods to be returned to the owner. But if no claim is put in by the party owning the goods within a month, they are condemned by law, and sold; one half of the proceeds going to the Government, and the other half to the seizing officer.

142. All Officers of Customs have not power to seize? No; for instance, the Tide Waiters are not, properly speaking, officers of the establishment, but a certain power is given to them to detain goods until they can call on an established officer to seize them. And I am not at all clear that a Locker has power to seize.

143. *By Mr. Holt:* Who have the power to seize? Landing Surveyors, Landing Waiters, and various other officers.

144. *By the Chairman:* The Police may stop goods suspected to be smuggled? Yes, but they have no power to seize; they become the informer.

145. *By Mr. Holt:* Would it not save a great deal of time if the strength of spirits were ascertained at the time of their being warehoused? That is the case, because they could not be entered in our books without that.

146. So that it should be final, and the duty should be paid according to that ascertained strength? That is a question for Parliament to decide. Supposing that after the spirits have been in bond some considerable time, a certain amount of loss has been sustained, I do not know why we should call upon a man to pay for that which he does not possess; because, even if a robbery has taken place from the Bonded Store, it has not been committed by the owner of the goods, and if the deficiency has arisen through leakage, the spirits have not gone into consumption, and therefore the Crown has no right to charge duty upon them. It is on that principle that the law has been regulated here. If a man has a hogshead of brandy in a Bonded Store, and he sells it to a publican, who, upon taking it out, finds it contains only ten instead of sixty gallons, we know very well that the publican must take out another cask to supply the deficiency; so that, in fact, there is no loss to the Crown;—the duty is still paid on the quantity that actually goes into consumption, and that, in my opinion, is all that we have any right to expect.

147. Supposing that he had taken this brandy into his own cellar, and it had leaked out, he would have had to bear the loss, and therefore, since it is for the convenience of merchants that these goods are allowed to be stored in bond, is it not right that they should be placed in the same condition as those who have paid the duty? I think the cases are quite different. One man has it under his own eye, and if he loses it, it is his own fault; but the other does not know of the leakage until he comes to take out the cask. The great difficulty here is, that the Bonded Warehouse-keepers will not take upon themselves to cooper; they say they have trouble enough to get their rents, without asking for cooperage charges. They have tried it, in fact, I am told, and they have always found difficulties. Perhaps the goods are left so long that they are sold at an overtime sale by me, for a mere nothing, so that they scarcely get their rent out of them.

148. Would not people look much better after their casks if they had to pay the duty? I agree with you there.

149. *By the Chairman:* Does it often happen that there is a large stock of goods remaining in the Warehouses without owners? Yes. There used to be, but it is not so now, though sometimes the owner will not take his goods.

150. What becomes of them? We sell them at overtime sales.

151. What is the limit of time? Three years.

152. Do you not think that is too long? It is the English law. We have a sale every year.

153. *By Mr. Holt:* Why do they sell so low. Have you ever ascertained what the strength of these over-time spirits is, so as to guard against fraud in these cases? No.

154. Is there not something very suspicious about these over-time goods when they sell for a mere nothing? Perhaps there ought to be a gauge made. At the present time our overtime sales are trifling in the extreme.

155. *By the Chairman:* When goods are removed from a Bonded Store to a vessel for exportation, who sees that they are actually put on board? An officer follows the cart; he is called a Cart-follower.

156. Where do they pay duty if they are sent to any place on the coast? They pay the duty here if they are intended for any port where there is no Custom House Officer, and then we have nothing to do with it.

157. *By Mr. Holt:* Would you allow goods to be sent to Twofold Bay without paying duty? Perhaps, under certain circumstances I should not object, because the officer there could receive the duty just as well as I could here. And there is this advantage to the shipper, that if the ship was lost he would not lose the duty; while the Government would sustain no

loss,

- Lt.-Col. loss, because the goods did not go into consumption. I consider that the Government has no right to any duty on goods which do not go into consumption.
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158. *By the Chairman*: I think you said the owners of the Bonded Warehouses give no security? No.
159. Who is liable, do you consider, for the duties on goods that are put into Bond? The importer.
160. Supposing he transfers his right to the property, how is that ascertained? That is very loosely done, generally speaking. If he sells his goods to A, B, or C, and wishes to protect himself, he should require them to enter into a fresh bond; but no one does it.
161. That might occur at any time before the three years elapsed? Yes.
162. Do you not think that the suggestion made in England, that the Warehouse-keepers, and not the importers, should be held responsible, with certain securities, is a good one? I agree to that. But there is a clause in our own Act which enables me to call upon the proprietor of any Bonding Warehouse to produce any particular packages, one or twenty, and if he cannot produce them I can fine him five pounds for each package.
163. *By Mr. Holt*: Is there no upset price on goods sold at overtime sales—must they not bring the duty? No; they are evidently not worth the duty, or they would not be abandoned. All goods seized must fetch the duty, but that is not the case with overtime goods.
164. *By the Chairman*: When these overtime goods are sold, what becomes of the proceeds? The rent is first paid, and the surplus handed to the owner, if claimed; if not, it goes to the Government.
165. *By Mr. Buckley*: What description of goods usually remain over three years? All kinds—spirits, cigars, and so on.
166. Are the spirits usually of an inferior description? Yes, they are generally inferior spirits.
167. You never find any good brands, such as Martell's, remain over? No. There is at this moment a puncheon of gin, I think it is, lying in the Queen's Warehouse, that was sold at an overtime sale, and the man that bought it will not take it away.
168. *By the Chairman*: Is there any time named for cancelling the bond of the importer? Three years.
169. Is there any law for that purpose? Yes.
170. In your Act? I am not aware. There is in the English Act.
171. Do you not think it desirable that the Acts relating to the Customs should be consolidated and amended now? Yes, very desirable.
172. How many years is it since we passed a Customs' Regulation Act? It was the 9th Victoria, No. 15, I think, in 1843.
173. What is the term in which they pass a new Customs' Act in England—five years? No, I do not think there is any particular time.
174. Do you not think it desirable that new Rules and Regulations should be made for the whole department? Yes.
175. Do you not think it would be well to have the Rules printed and distributed to each officer and to the public? I think it would.
176. Do you not know that there have been great complaints that the public never could get the Rules, and the officers themselves could not get them? Yes, as regards those of Colonial appointment.
177. *By Mr. Buckley*: About what proportion is there, at the end of each year, of overtime goods? I could not tell you the proportion now. It is very small.
178. Has it not generally been the case that the greater proportion of overtime goods consisted of cigars and tobacco? No, always a quantity of spirits also.
179. Have you not been compelled, on a great many occasions, to destroy such goods, because no person would purchase them? Yes.
180. Have you ever exercised any discretion as to keeping these goods, or have you generally made a point of destroying them? We have generally destroyed them, but the law allows me to extend the time, and if, on inspection, I find them to be good in strength, the casks right, and so on, I extend the time for another year.
181. Does that apply to tobacco as well as spirits? Yes.
182. These goods that are sold at auction as overtime goods can go into consumption? Yes.
183. Is it your opinion that these goods generally fetch a fair and reasonable price in proportion to their quality? I am not prepared to answer that question directly, but I believe they do.
184. Have any instances occurred of spirits not being sold which have been put up at overtime sales? I do not recollect any.
185. In the event of anything of the kind not being sold, would you consider it necessary to knock in the heads of the casks? Yes.
186. And you give no consideration to the owner of the Bonded Store? No.
187. *By the Chairman*: There is a Custom House Officer stationed at Morpeth? Yes.
188. Is that a free port? It is no port at all; I stationed the Officer there purely as an accommodation to the public.
189. Is there a Bonded Warehouse there? Yes. An Officer has long been stationed there to superintend the colliers and steamers going up the river, but it is only recently a Bonding Warehouse has been established there with the sanction of the Government. I have been obliged to step out of my way to allow the Officer there to take a deposit of money; he is not a Collector, and therefore cannot collect duties; but to obviate the difficulty which would arise if gentlemen who wished to take goods out of the Bonded Warehouse at Morpeth had to go all the way to Newcastle to pass their entries, pay the duty there to Mr. Bolton, who is a Collector, and get his order for the delivery of the goods, I allowed the entries to be made at Morpeth, and the money to be handed over to Mr. Allman, who immediately accounts for it to Mr. Bolton and sends it to him. It is therefore, after all, Mr. Bolton's collection, as Collector of the port of Newcastle.

190. *By Mr. Buckley*: There were some Returns called for a short time ago, from which it appeared that you did not recognise Morpeth in any way? No, only Newctstle. But I have now furnished a Return shewing the amount of duty paid on goods taken out of the Morpeth Warehouse, and on those taken out of the Warehouse at Newcastle, and I own that the difference astonished me; the amount of duty paid at Morpeth was about £7,000, and the amount paid at Newcastle was only about £1,700, shewing that the establishment of the Warehouse at Morpeth has been a great accommodation to the public.
191. *By the Chairman*: Is there any such Warehouse at Eden? No.
192. It is not required? No.
193. *By Mr. Buckley*: I suppose just as much security and protection to the revenue is afforded to the Bonded Warehouse at Morpeth as at Sydney? Yes. The Officer there, of course, keeps his key, and Mr. Taylor his key. It is entirely under the control of Mr. Allman, but there is just the same security as there is in any other Bonding Warehouse, I believe.
194. You are in direct communication with the party in charge of the Bonded Store? Only with Mr. Bolton. I send to him for the returns from Morpeth, and, of course, he prepares them from his books.
195. *By the Chairman*: Who issues the order for the discharge of goods from the Bond at Morpeth? Mr. Allman must. He writes the Locker's order, which, in truth, is to himself; that of course is filed as his security, and the other documents go to Mr. Bolton, at Newcastle, together with the cash.
196. Is there a duplicate warrant for delivery handed by the Locker to the Warehouseman? There is not.
197. Do you not think that a proper regulation? I think there is no objection to it.
198. *By Mr. Buckley*: You never have any complaints from any party at Morpeth, connected with the store? No.
199. No complaints of want of attention or of irregularity in any shape or way? None whatever.
200. *By the Chairman*: In the case of an order to discharge goods where no duty is involved, is it left to the option of the party getting the order to land the goods, or to deliver them over the side to another vessel? He cannot, in strictness, deliver them over the side to another vessel; he must land them.
201. What is the object of that? I do not know. It is the law. Of course I should give him leave if they were free goods.
202. *By Mr. Buckley*: You would allow a lighter to come alongside? Yes, and send an Officer with the lighter. I believe every facility that can be granted to the public is granted here.
203. *By the Chairman*: Who pays the Officer on board the lighter? The Government.
204. Do you not think the party should pay? If it was a cart it would be the same thing. I think if we employ an officer for the protection of the revenue, it is the duty of the Government to pay him.
205. Have you any other suggestions to make for the improvement of the administration of the Customs Department?

Lt.-Col.  
J.G.N.Gibbes  
28 Nov., 1856.

APPENDIX A.

*INSTRUCTIONS by the Commissioners of His Majesty's Customs, to the Warehouse-Keepers at the Free Warehousing Ports in the British Possessions abroad.*

To

*Warehouse-Keeper at the Port of*

ARTICLE 1. You will observe that by the Act 6 Geo. IV, cap. 109, sec. 11, you are required to take the oath therein set forth on your admission into office, and that by the 9th section of said Act, you are prohibited from receiving any fee or reward without the sanction of the Lords of the Treasury, on pain of dismissal for the first offence; and that by the 29th section of the aforesaid Act, if any person shall give, offer, or promise to give any bribe or reward to any Officer of the Customs, to induce him to neglect his duty, or to do any act whereby the provisions of any Act of Parliament may be evaded, every such person forfeits the sum of £500.

Art. 2. Having been appointed to carry into execution the provisions of the Acts 6 Geo. IV. cap. 114, 7 Geo. IV. c. 48, and 7 and 8 Geo. IV. c. 56, so far as relates to the Warehousing of Goods Free of Duty on the First Entry thereof at the Port of

Art. 3. You will receive herewith Copies of the above Acts, and you are to use every means in your power to enforce a due observance of the same, so far as relates to your particular department, observing that if you fail to represent to the Collector and Comptroller any instance of neglect of the regulations contained in the said Acts, you will be held responsible for the same; and when you have occasion to represent any matter to the Collector and Comptroller relating to the Service, or to the misconduct of any person, on any subject connected with the duties of your office, you are to make such representation in writing.

Art. 4. You are to give regular and due attendance, either in your office or at the Warehouses, and at such hours as may be most convenient to the general trade of the Port, and you are diligently and faithfully to employ yourself in the execution of the duties hereinafter mentioned, and when you are unable to attend your duty through sickness, or other unavoidable causes, you are to acquaint the Collector and Comptroller therewith, without loss of time, in order that the duty may be otherwise provided for.

Lt.-Col.  
J.G.N. Gibbes  
28 Nov., 1856.

See Instructions  
to Warehouse-  
keepers in United  
Kingdom.

Art. 5. A very important part of your duty will be to see that the goods deposited in the Warehouses are properly secured, and that no part thereof be taken out for Home Consumption, until the full duties thereon have been first paid, nor any goods taken out for exportation until security has been given for their due exportation, and with a view to the correct understanding of your duty in these respects you will receive copy of our Instructions to the Warehouse-keepers at the several Out Ports of the United Kingdom for your general information, only observing that you are to consider those instructions as you guide.

Art. 6. You will also receive form of a Warehouse Ledger, wherein you are to keep an account of all goods received into, and delivered from, the Warehouse, under the authority of the aforesaid Act.

Art. 7. On receiving a Warrant or other proper document for goods intended to be Warehoused, you are to enter the same in your Warehouse Ledger, and when the Landing Officer's Book, containing the particulars of the goods landed by virtue thereof is received, you are to enter such particulars in your said Ledger, under the heads of the respective Ships in which the goods were imported.

Art. 8. In order to prevent confusion and unnecessary delay in searching for goods in the Warehouse, when wanted, you are to take care that they be stowed in such a manner as to afford free and convenient access to the several packages, and in case of refusal on the part of the proprietor of any Warehouse to make the necessary arrangement for the proper stowage of goods, you are to report the same to the Collector and Comptroller, who will revoke their approval of such Warehouse if they deem it expedient, and whenever the contents of any package shall be discovered to have been materially diminished by leakage, or any other cause, you are to report all the circumstances to the Collector and Comptroller, in order that they may take such measures as may be deemed necessary.

Art. 9. When you have received a Warrant certifying that the duties have been received, or notice that bond has been given for due exportation of any goods, you are to make out on the proper certificate an account of the landing mark, number, weight, gauge, tale, or admeasurement of the packages, and when you have duly recorded these particulars in your ledger, you are to date and subscribe the order authorizing the delivery of the packages therein mentioned, either for home consumption or exportation, as the case may be, taking care in the latter instance to compare such document with the merchant's endorsement on the cocket, which you are to sign in proof thereof, and that the goods be delivered into the care of the proper officer for shipment. And you will take care that goods entered for exportation be not delivered from the Warehouse or other place of security, unless there is sufficient time to deliver them to the searchers, that they may be shipped during the hours of business on the same day, except in such special cases as may be directed by the Collector and Comptroller.

Art. 10. You are frequently to inspect the state of the Warehouses, and whenever you discover any defects therein, you are to give notice to the proprietors to repair the same, and you are to see that every possible precaution be taken to prevent fire, by not permitting candles to be used except in vaults, or places where day-light cannot, without lessening the security of the revenue, be introduced, and in such cases, with lanterns.

Art. 11. At the expiration of the time allowed for the deposit of goods in the Warehouses, &c., you are to give or send a notice to the proprietor of the said goods, and in case the regulations under which they are permitted to remain in the Warehouse are not complied with, you are to make a return of the goods to the Collector and Comptroller, in order that they may be dealt with as directed by the 41st Section of the Act 6 Geo. IV. c. 114, unless they shall have deemed it fit to grant further time for any such goods to remain warehoused.

Art. 12. You are to have charge of the Keys of the Padlocks provided at the expense of the Crown, for the Warehouses in which bonded goods are deposited at your Port, and of which you are to take due care.

Art. 13. You are to refer to the Collector and Comptroller when you are at a loss on any point connected with your duty, and in case they cannot decide the matter, you are to request them to lay it before us for our directions.

Art. 14. You are to use your best exertions to prevent fraud or depredations in the Warehouses when the parties are taking samples, and you are to see that the regulations relating thereto, laid down by the Collector and Comptroller, be strictly attended to.

Art. 15. You will observe, that the Collector and Comptroller are authorized by the 40th Section of the Act 6 Geo. IV., c. 114, before alluded to, under such regulations as they shall see fit, to permit the proprietor, or other person having control over any goods so warehoused, to sort, separate, pack, and repack any such goods, and to make such lawful alterations therein, or arrangements or assortments thereof, in the presence of the Officers appointed for that purpose, as may be necessary for the preservation of such goods, or in order to the sale, shipment, or legal disposal of the same; and also to permit any parts of such goods so separated to be destroyed but without prejudice to the claim for duty upon the whole original quantity of such goods; provided always, that it shall be lawful for any person to abandon any whole package to the Officers of this Revenue for the duties, without being liable for any duty upon the same; and you will note in your accounts the particulars of any alterations that may be made in the original packages, as also the contents of the new ones.

Art. 16. You are to use your best endeavours to prevent goods being deposited in Warehouses for which they have not been approved, the Collector and Comptroller are directed to furnish you with lists, which you will cause to be affixed in some conspicuous part of each bonded Warehouse in the Port.

Art. 17. You are once a quarter, or oftener, if necessary, to sort out the Landing Waiter's Books, Warrants, and other documents, and compare the same with the entries in your Warehouse Ledger, and when the account is balanced, you are to enter the delivery

notes



notes at the end of the Book, and if the whole appear to agree, you are to write off the same in the Ledger, and deliver such book and document to the Comptroller for his examination.

Lt.-Col. J.G.N. Gibbes

Art. 18. You are to deliver, at the expiration of each Quarter, to the Collector and Comptroller, a copy of the entries in your Ledger, detailing the balances on each ship from the preceding quarter, the particulars of every delivery, whether for Home Consumption or otherwise, with the quantity remaining on hand on account of each ship.

28 Nov., 1856.

Art. 19. You shall frequently look over and duly observe the foregoing, and such other Instructions as you may from time to time receive from this Board, or from the Collector or Comptroller; and you shall faithfully and diligently demean yourself, and you shall not do, or suffer to be done, abet, or conceal, any act or thing prejudicial to the Revenue, or contrary to the laws of importation or exportation; taking special notice that you will be called upon to make good any loss which the Revenue may sustain from your negligence or misconduct.

CUSTOM HOUSE, LONDON.

TUESDAY, 9 DECEMBER, 1856.

Present:—

MR. BUCKLEY,  
MR. EGAN,  
MR. GORDON,

MR. LORD,  
MR. NICHOLS,  
MR. WEEKES.

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

George Thornton, Esquire, J.P., called in and examined:—

G. Thornton, Esq.

1. *By the Chairman*: You were formerly a Custom House Agent? Yes.
2. I believe you were regularly articled to the profession, and brought up to it? Yes.
3. You have given up the business of a Custom House Agent? I have, for the last three years.
4. How long did you carry on business? Nearly eighteen years, but not all that time on my own account. I was only a clerk a portion of the time.
5. During that time you were engaged in business either as a clerk or on your own account? Yes.
6. You were licensed, of course? Yes.
7. Did you pay anything for your license? No. I gave a bond for the proper performance of the duties, that was all.
8. That is the case with every Custom House Agent? It is.
9. Did you occupy premises in the Custom House? Yes.
10. Did you pay anything for them? No.
11. Were any of the other gentlemen who carried on business as Custom House Agents in occupation of premises in the house? Yes, several others.
12. Did any of them pay for the accommodation? No.
13. Did any of them carry on any other business besides the business of Custom House Agents within the building? Yes.
14. Were they engaged in trade as owners of ships, consignees, and so on? Yes. Myself and others did carry on business other than that strictly appertaining to a Custom House Agent.
15. During the time you were a Custom House Agent, I presume you had good opportunities of judging of the system pursued in the Customs Department? Yes. I believe I am thoroughly conversant with the whole of the details from one end to the other, in all their ramifications.
16. Do you think the system carried on in the Customs Department was a good and efficient one for the public? No; I have always been of a contrary opinion.
17. What part of the system did you object to principally? There are so many objections, and so various, that my answer would necessarily be a very lengthy one. I have not considered the answer I should give, as I did not know the questions to be asked, and, therefore, I am not prepared at the moment to answer it as fully as I could wish to do; but the system generally was insufficient.
18. The general management of the Department was insufficient? Not the management so much as the system. As regards the officers, their ability, character, and general management was insufficient, in my opinion; and, as regards the collection of the revenue, the system was inefficient.
19. Are you acquainted with the system carried on with reference to Bonded Warehouses? I know the system carried on at the Bonded Warehouses. In fact, I was myself Storekeeper at a Bonded Warehouse at first.
20. Do you believe the way in which the Bonded Stores have been managed is the proper manner, having due regard to the interests of the public? It is defective in a great many respects.
21. In what way would you say it is defective—do you think there is not a proper supervision by the Officers of Customs? I was about to make the remark that I do not think the supervision, as carried on, was sufficient for the due protection of the revenue. In fact, there is no "supervision" at all, according to my understanding of it.
22. Who supervises that Department? There is no supervisor except the Collector of Customs that I have been aware of. There has been no supervision, I can answer more properly.
23. No proper supervision? No proper supervision.

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24. Has the Landing Waiter charge of that department? No. There is an officer—I do not know what he calls himself—he is the gentleman who is waiting outside.
25. He is called the Landing Surveyor—Mr. Garling? Yes, that is the person I allude to.
26. He is the person who has charge of that Department? Well, I should be at a loss to tell you what that gentleman's duties have ever been.
27. He is supposed to have charge of the Bonded Warehouses? He is supposed to have charge of them.
28. Do you know whether there is any system of check to prevent fraud upon the revenue in these Bonded Warehouses? The only check is a lock and key kept by the Locker; the Bonded Storekeeper has another lock and key.
29. So that, by an arrangement between the Locker and the Bonded Storekeeper, the Government might be plundered to any amount? Yes, to any amount.
30. Have you heard of such things as spirits being taken out of Bonded Stores without payment of duty? I have heard such things, but I should not like to speak of what I do not know of my own knowledge.
31. You have heard rumours of that kind? Yes; it is a popular impression, and, perhaps, a correct one, that a great deal of "evaporation" goes on. I would rather not be asked these questions, if you will pardon me for saying so, but I may say that I know, of my own knowledge, of cases of cigars, and boxes of liqueurs, and other such packages being plundered by some persons or other. These are matters which occurred many years ago, but whether they have continued since I am not in a position to say.
32. What was the character of the Lockers generally during your time? Some of them were very good, but others of them quite the reverse.
33. Do you know of any check having been introduced to prevent similar occurrences to those you have mentioned as having occurred some years ago? No; I cannot conceive how there can be any check. If the Locker chooses to lend himself to the Bonded Storekeeper there can be no check.
34. I suppose if the Bonded Storekeeper provides himself with an extra key, that is, a duplicate key of the Locker's lock, he can go in when he likes? Yes; but I do not suppose any of them would do so. The stowage of packages in Bonded Stores has, in my opinion, been highly irregular. I allude to the impropriety of putting three or four tiers on the top of each other; for instance, three or four tiers of hogsheads. No doubt a great deal of loss has been occasioned by that. I have heard many complaints of deficiency in the packages, but of these people can speak for themselves; for instance, I have heard Mr. Aldis, the tobacconist, complain repeatedly of the robbery and plunder of his cigars in bond. I have heard him complain of robberies of his cigars.
35. Have you heard any of the importers of spirits complain? Yes, many of them.
36. Do these Bonded Storekeepers pay anything for the privilege? No.
37. Is it a profitable business, can you say? Very profitable.
38. Do you think they can afford to pay a license fee? I think they would not object to pay it. I do not know what the profits may be now, but speaking of Unwin's store, where I was experienced, I believe the profits of that store were about £5,000 a year.
39. *By Mr. Egan*: At what time was that? It would be within the last five years, particularly during the gold career; and even before then the profits were very large.
40. That was in 1853? Yes.
41. *By the Chairman*: Did you ever hear of any spirits being taken out by means of a syphon through the iron bars of a window? I have no knowledge of such a thing personally, but I have heard of it as matter of common repute. I know that it is generally complained of, that in re-gauging spirits, great deficiencies between the quantities bonded and the quantities on which duty was paid were apparent; and I have often observed personally that it could not arise from leakage.
42. Are the charges for storing bonded goods fixed by the Government or Collector of Customs in any way? No; they are not regulated by law in any way.
43. *By Mr. Weekes*: Are they not limited by law to a certain amount, although their regulation up to that limit depends upon private arrangement? I am not aware of any law limiting Bonded Storekeepers' charges in any way.
44. *By the Chairman*: Do you know whether there are any printed regulations issued, according to which the business of Bonded Storekeepers is to be carried on? I have not known of any regulations having been issued.
45. They can make what charges they like? Competition generally guides them, but I know there have been great complaints of excessive charges.
46. Do Bonded Storekeepers bond their own goods in their own stores? They do.
47. Can you tell us what check is maintained with reference to goods taken in and taken out, to prevent fraud on the revenue? The check, in my mind, exists only in name and not in reality. They ascertain at the end of three years, and this is a system only lately adopted, the quantity of spirits stated by the warehouse books to be in bond, and those that have been in bond for three years without payment of duty are sold, but whether they really exist in the bond or not is not looked into, that is to say, stock is not actually taken, therefore it is no check at all.
48. Spirits and other dutiable articles in the store might have been taken out? Yes; but this applies to former years.
49. And then, at the end of three years, they are sold, as if they were in store, although they may not be there at all? Perhaps so. It is open to the Bonded Storekeeper to purchase at these sales, and as they have a claim for rent, they generally get them, and whether the goods exist in name or in fact, they are written off the books. Instead of actually taking stock the books are resorted to. But of late years, all purchasers at these sales have to pay duty or export the goods purchased.
50. *By Mr. Weekes*: Do they never take stock? I have never known stock to be taken. The way they take stock is by the books.

51. *By the Chairman*: They do not actually take stock? No, not to my knowledge. I G. Thornton, Esq., would suggest that there should be a Supervisor or Inspector of Bonded Warehouses, who should be a man of knowledge, ability, and integrity; it requires perfect integrity.
52. Would you give such a man a good salary to put him above temptation? I would, and 9 Dec., 1856. I am sure the Government would save a large amount; I cannot estimate what would be the amount.
53. What salary would you suggest for this gentleman? £600 a year; because such a man would of necessity have to give the whole of his time to it, and keep a large amount of accounts and carry on a great deal of correspondence. There would also be much responsibility, and naturally, much odium cast upon him, for he would have to compel the Bonded Storekeepers to store their goods properly, to have their cases properly secured at all times; and to check that system of speculation that was so rife in former years.
54. Do you think one man could do it? I am sure one man could do it. There is one man in the department now—he is not a personal friend of mine, and therefore, I am not actuated by any feeling of interest in him—but from my knowledge of that man's character, integrity, and abilities, I feel confident he would be a proper man to appoint to this situation. I have watched his career for many years, and the tongue of scandal never yet approached him. If I were asked the question, I would name him.
55. What is the practice with reference to gauging goods when going into bond, and when being taken out? The Landing Waiters gauge the goods, and from their statement they are entered in the books. The goods are marked and numbered, and a regular account is opened in the warehouse books. That involves necessarily an amount of talent and educational acquirement.
56. Do the Landing Waiters generally possess that necessary amount of acquirement—those that you have known? Not generally, I think.
57. Have you known some of them incompetent to add up the quantities? I have known some of the Lockers, and I think I may say some of the Landing Waiters, who were not competent to add up a common column of figures; in fact, I knew one Locker who could not ascertain the quantities; but he is not now an officer of the department, and therefore, I should not like to name him.
58. Do you believe there have been more of that class of persons who were incompetent from want of knowledge? I believe there are some.
59. The Lockers gauge the spirits on their being taken out of bond? Yes, and on their certificate the Custom House Clerk receives the duty.
60. Do you believe the Government has been defrauded by the ignorance of these Lockers, in not putting in the certificate the necessary quantities? Unquestionably; it follows that if a man cannot gauge a cask, and cannot ascertain the quantity of spirits it contains, the Government must be defrauded.
61. *By Mr. Lord*: Might he not make a mistake on the other side? The party himself who had to pay the duty would look after that. If any merchant is about to pay duty on a cask of spirits he knows from his certificate the quantity and the strength, and if the officer makes a mistake against him he is sure to know it.
62. *By the Chairman*: Is there any regulation about this re-gauging? The system pursued is this,—the party requiring to have goods re-gauged gets an order from the Warehouse-keeper to the Locker, instructing him to get the cask ready to test it, and to certify the quantity and strength; he does so, and upon his certificate the duty is received.
63. *By Mr. Egan*: Must not a certain period elapse before such a certificate can be granted to any one, and within which the duty must be paid on the original gauge? It was not so in my time.
64. *By Mr. Lord*: Are the public charged anything for re-gauging? Not when duty is to be paid. If a merchant sells a quantity of goods, and wants to know the quantity, the Locker is employed privately to gauge them, and he gets something for it; but that is a private matter entirely.
65. Does the Locker put that money in his pocket? Yes. For instance, suppose Mr. Long buys twenty hogsheads of brandy from Campbell and Co., the sale, as is generally the case, would be by re-gauge; the Locker is employed to re-gauge the casks, and he gets so much a cask for doing it.
66. How much is it—are you aware? I think it is eighteen-pence a cask. But there is not much of that carried on.
67. Mr. Long, the buyer, would pay in that case? No, the seller, I think, would be the party to pay, because it would be his duty to prove the quantity.
68. Is it not customary for parties to purchase twenty hogsheads and only take one out of bond at a time? Yes, certainly.
69. Consequently there would only be one gauged at a time? The Locker does not charge for that; it is a portion of his duty.
70. *By the Chairman*: You say the Landing Waiter gauges the casks before they go into store? Yes, and tests the strength.
71. That is for the Customs? Yes.
72. What sort of persons are they generally in point of character? They are not always of the character and ability I should like them to be.
73. Have you not known some of them to be notorious drunkards? I cannot deny the fact. I do not like to be asked these questions, but I cannot deny the fact when I know it of my own knowledge.
74. Perhaps some of them get drunk from smelling the spirits so constantly? I do not think that would make them drunk. I was for some time employed in a brandy store, but although constantly smelling it, I was never intoxicated.
75. I suppose they must taste it to tell whether it is rum or brandy? They could tell that from the appearance of it. It is certain they cannot get drunk without tasting. The smell,

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smell, in my opinion, would never make a man drunk, or I should have been drunk every day; for I was always amongst spirits. I judge, from my own experience, that the smell of spirits would not make any body drunk.

76. There are different Bonded Stores in different parts of the town? Yes.

77. When spirits are gauged by the Landing Waiter they are taken away in carts, I presume? Yes.

78. Do you know whether any body belonging to the Customs goes with them? There should be. It is the duty of the cart followers, as they are called, or sometimes a Tide Waiter or a messenger; what rule is practically carried out I am not in a position to say; if it is not done, the cask might be taken to any place the party chose.

79. The cask might be taken to the Bonded Store, but not the spirits? They might all be taken away. The only check, as I said before, is by referring to the books. Until the Government do appoint some supervisor—a man duly qualified and above suspicion—the same thing most necessarily go on. I would recommend that the Government should be very particular in making such an appointment, because there are very few men qualified for such a position.

80. What is the object and duty of the Tide Waiters? A Tide Waiter is a sort of bailiff to remain on board a ship to see that no dutiable goods are landed without the duty having first been paid: the object is to protect the revenue.

81. What class of persons are they generally taken from—an inferior class? An inferior class of persons, I should say, with some exception always.

82. The ostensible object in putting them on board vessels is to prevent smuggling? Yes.

83. Do you think it has that effect? No, I think it has not. I might say it is a facility for smuggling.

84. You do not think they have the slightest effect in checking smuggling? No, except in instances where the officers are careful and attentive to their duties; but while they receive such miserable pay, and such uncertain employment, they cannot be efficient.

85. You do not think they can live on their pay, except they have recourse to extraneous means? I am strongly of that opinion. They are only paid when employed, and they are only employed, I should say on average, four months in the year. I speak, under correction, I think they used to get six shillings a day before the gold increase was given, and how any man can support a family on such pay, I am at a loss to know. Therefore, I say that it is a facility for smuggling, clearly.

86. These Tide Waiters do not rise in grade or in rank in the Customs' Department? Yes. I know some instances where Tide Waiters have risen to other offices.

87. It is not the general rule? It is not the general rule, I believe. I know of some who have been selected as clerks and Lockers; they have been men of a superior class.

88. According to your opinion, they are of no use whatever in preventing smuggling? Yes; I would recommend the abolition of the system of Tide Waiters.

89. What would you recommend instead? I would recommend a greater number of Landing Waiters, who should be of a different order. For instance, I would suggest that one expert Landing Waiter, a man who would be sober, careful, steady, and attentive to his duties, and having some ability, could attend to the discharge of three ships lying at a wharf; take for example the Circular Wharf, and could perform the whole of the duties the Tide Waiters are now supposed to perform, keeping at the same time a thorough check on improprieties of all sorts; and I would also recommend that all ships should have their hatches, after a certain hour in the day, fastened and secured by a Locker.

90. *By Mr. Egan:* And sealed? Sealed would be better, in addition to the lock. In carrying out that idea too, I would also suggest that ships when reported inwards should be properly manifested, and afterwards made to account for any difference between the quantity reported to be landed and the quantity reported inwards. That would be, in my estimation, a very excellent check as regards discharging ships, and I believe has succeeded in America. The duties of the Tide Waiters are generally carried out by the discharging clerks, as far as the numbers and marks of the packages are concerned.

91. *By the Chairman:* I suppose in severe weather these Tide Waiters are often below? Yes, and they may be often on shore. Perhaps the next witness will tell you instances of some men having been discharged for leaving their vessels.

92. Have you heard instances of any of these men receiving presents from the captains of ships? I certainly have heard of it; and I have known instances where the Tide Waiters have been found not to be on board their ships.

92. Do you know of your own knowledge of any instance of their receiving presents? No.

93. *By Mr. Gordon:* In what way do you suppose the Tide Waiters are a facility for smuggling, as you said just now? Because they are supposed to be the only check on vessels discharging after hours, or landing dutiable goods without payment of duty; there is no other preventative adopted by the department than the Tide Waiters, and their pay is so wretched, and the men themselves are sometimes of such a class, that they cannot be above the temptation that may be offered to them.

94. Do not the dutiable goods come under the notice of the Landing Waiter, as well as the Tide Waiter? The Landing Waiter only attends in the the day-time, and the hatches are not secured at night, because the Tide Waiter is supposed to be on board, and to be a sufficient check as to any landing at night-time.

95. *By Mr. Buckley:* You say a Landing Waiter could attend to three vessels—would it be possible for him to attend to one at Campbell's Wharf and two others at the Circular Quay? Not unless they were close together. If they were at the north-western end of the Circular Quay, where it joins Campbell's Wharf, he might.

96. But if a ship were at Botts' Wharf, and another at the Circular Quay, there should be one Landing Waiter to each wharf? I think there should be one to each where the distance is so great between them:

97. *By the Chairman*: Is there any night guard—any boats that row guard in the harbour? G. Thornton, Esq.
98. *By Mr. Gordon*: Is there not a Water Police guard at night? It is no part of their duty to attend to these matters. In fact, I question if they have the power to make a seizure. They might stop any goods that were being landed contrary to law, but I do not think they legally possess the power to make a seizure. 9 Dec., 1856.
99. But a Water Police boat does row about the harbour at night? Yes; there is a Water Police regulation of that sort.
100. *By Mr. Buckley*: Have you ever known Tide Waiters to allow of smuggling—has it ever come under your own knowledge? No.
101. You said it was quite possible for a dray load of spirits to be taken away, intended for a Bonded Warehouse, and not go there? Unless accompanied by a cart follower.
102. Is it likely such a thing has ever occurred as a dray load of spirits being taken away in that manner? No, I think not.
103. You were speaking about disposing of goods that had been over the proper time in bond, do you know of any instances of goods having been sold at public auction that were not in store? Of my own knowledge I do not.
104. But you have heard of such things? I have.
105. In what way could they be taken out without the knowledge of the Customs Officers? Anything I could tell you would only amount to supposition.
106. Is it the invariable rule, that Bonded Storekeepers purchase everything put up to auction in this way? It is open to public competition, but the Bonded Storekeepers having a large amount of lien upon them for rent, are generally the purchasers, because nobody can compete with them.
107. *By Mr. Weekes*: Are they sold without sample? I believe by description.
108. *By Mr. Buckley*: Taken from the books of the Customs? Yes, and advertised in the newspapers.
109. *By Mr. Weekes*: No sample is exhibited at the sale? Not that I am aware of.
110. *By Mr. Lord*: Do you think it would be possible to do away with the private Bonded Stores, and bond all goods in a large Government store? I think the quantity of dutiable goods in bond is so large, that I do not know of any range of stores that would contain them.
111. *By the Chairman*: Would they not be more easily supervised in a Government building? I have no hesitation in saying that if one Government building could be erected, no impropriety could be carried on, under proper regulation. But that would interfere with the vested rights of the proprietors of Bonded Stores.
112. *By Mr. Buckley*: Would it be as convenient to the public generally? Yes, more convenient. The hours for keeping open the present Bonded Stores are necessarily varied, and are therefore inconvenient; for instance, some are only open for an hour in the day, others for two hours, some all day. I have known many instances where a party going to a store to get a cask re-gauged, could not get back to the Custom House in time to pay the duty, and get an order for its delivery, before the store was shut. If one Bonded Warehouse were erected, sufficient to contain all the spirits and bonded goods of the Colony, and were carried on by the Government, I have no doubt it would work satisfactorily, because it would open at a given hour, and close at a given hour, and remain open all day.
113. *By Mr. Lord*: Do you think the rent of these goods would be quite sufficient to pay the expenses of such a store? Far beyond it. It would not only be a self-supporting establishment, but would return a large revenue besides, because, if Bonded Stores pay as at present conducted, it would pay in a greater ratio.
114. *By Mr. Gordon*: Do you not know as a fact that what pays private individuals does not pay the Government? The Government does not generally manage so well, but I have no hesitation in declaring that one Government Bonded Warehouse would be a great public convenience, a check on a great many improprieties, and a source of very large revenue.
115. Do you not think that Bonded Warehouses, distributed as they are now, are a much greater convenience to the public than one large warehouse confined to one place? Decidedly not.
116. How do you arrive at that conclusion? I have held the position of storekeeper to a Bonded Warehouse, and I have no hesitation in saying that if one large Bonded Store were erected by the Government at the Circular Quay, near the Custom House, or at some central place, it would be much more convenient than the stores as at present scattered, and the hours as at present varied.
117. Do you not think it would require a great many places of ingress and egress to prevent confusion? No doubt, and so does a large store like Campbell and Co's.; there are numerous places of ingress and egress there.
118. *By Mr. Lord*: Would it not be a saving of Lockers, and all that class of people? It would a great public convenience, a great saving to the revenue, and would yield a large return.
119. *By Mr. Gordon*: Will you point out in what way it would be a saving to the revenue? In many ways—practices carried on under the present system could not be carried on.
120. Has it not been the custom to take stock in these Bonded Warehouses once a year of late years? Not to my knowledge. During the time I was there stock was not taken.
121. Colonel Gibbes gave evidence before this Committee to that effect, if I understood him rightly? It must be since I ceased to be interested in such matters. I have been away three years.
122. *By Mr. Buckley*: If a license fee were imposed on Bonded Storekeepers, would it tend to increase the rental of spirits and other goods put in bond? I think it would have that effect.
123. In fact the public would pay it? The public would pay it.

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124. Would it not require to be a fee of large amount to make any increase in the rental? I do not see the object of the Government in charging a license fee, or why it should be charged at all.
125. *By the Chairman*: Do these licensed holders of Bonded Stores give any security to the Government? I should say they do. I believe they do, though I am not aware of the fact. I should suppose they do.
126. Do you think they ought? I think they ought.
127. *By Mr. Lord*: Are you not aware that large profits are made by Bonded Storekeepers in the shape of rent? Yes.
128. *By Mr. Gordon*: Do you think they are much greater in proportion than the profits of ordinary stores? Yes, much greater. I know that in Unwin's store the profits arising from rents alone amounted to £5,000 a year.
129. But there must have been considerable expense attending that? I have no hesitation in saying that since that period, and during the gold career, when goods were so abundant and the stores so full, the same store must have yielded a greater amount than £5,000 a year.
130. Do you think that is the case now? No; the quantities of goods have fallen off to a very great extent.
131. Is it not within your knowledge that if you have goods arrived in the harbour, you have some half-dozen Bonded Storekeepers running after you, to see if you will give the storing of them to them? Yes, no doubt that is the case; but the number of stores has been extended of late years.
132. *By the Chairman*: Do tobacco, spirits, and cigars go into the same Bonded Store? Yes. They are stowed separately, but are taken into the same store.
133. You have said that a Bonded Storekeeper can store his own goods—can he store any goods than those that are dutiable in his Bonded Store? I do not know that.
134. Do you think he ought not to be allowed to do it? I think he ought not.
135. Can he refuse to accept goods? I think he could refuse. I think the Collector of Customs could prevent his receiving any free goods, and Colonel Gibbes, if he knew it, would, I am sure, prevent such a thing.
136. *By Mr. Gordon*: Have you observed the scale of license fees intended to be imposed on the Bonded Warehouse-keepers? I have not seen it.
137. If it is proposed that each Bonded Warehouse-keeper should pay a license fee of £50, and £1 for every ten tons his store will contain by measurement over a certain quantity, do you think that would be an equitable or fair way of putting a charge on Bonded Stores? No, I do not think so, because some stores are far more convenient than others, and more popular; one man would pay for surface where another man would be paying for value. I think that is an improper basis to go upon.
138. *By Mr. Buckley*: What principle would you lay down as equitable for a fee of that kind? I think the charge should be according to the position and repute of the store.
139. *By Mr. Gordon*: Do you think it desirable to have a fee at all? As a means of revenue, I should say not.
140. *By the Chairman*: Do you know that in England every thing is regulated by the Government—rent, charges for cooerage, and so on? I believe that is the rule. I have had no experience in England; I have never been there.
141. I suppose you are aware that there is no Act to regulate Bonded Warehouses here? I am not aware of any law, or any rules or regulations affecting them.
142. You think that one Bonded Store, superintended by responsible and respectable persons, would tend to prevent deficiencies? I should have said improprieties. They would be a great public convenience, as well as a source of large revenue.
143. *By Mr. Gordon*: How many thousand pounds would it take to build such stores as would be sufficient at the present time? I do not think it would reach £100,000. The present Commissariat Stores, with some additions to them, would, in my opinion, contain all the goods at present in the Colony; and there would be no expense of cartage, and no danger of loss, but the goods could be landed on the wharf, gauged there, and put into the stores at once.
144. *By the Chairman*: Those stores are not half used now—scarcely occupied? I believe not.
145. *By Mr. Buckley*: The more popular a store is, the greater the amount of goods bonded in it, of course? Unquestionably.
146. Under these circumstances, how would you fix or vary the license fee? It would be such a difficult and invidious question of arrangement, that I would rather say I would not fix any license fee at all. I would recommend no license fee at all. For instance—Campbell and Co.'s store, by reason of the liberal conduct and character of the proprietors, is highly popular, and not only so, but highly convenient. For such liberality I would not tax them; but if you tax them in an *ad valorem* shape, you would tax them heavily.
147. Suppose they were taxed in proportion to the quantity of goods in the store? It varies every day.
148. Suppose an average were struck every month of the contents of the store? You could not come to any correct or just conclusion; you would either be injuring unduly the warehouse-keeper or the Government.
149. You cannot suggest any mode? No; it would not be correct to charge any license fee at all at present.
150. *By Mr. Weekes*: Do you say that because they are not making money now, or on the principle? That is one reason, and the principle I have stated is another.
151. Do you see any grounds why keepers of Bonded Warehouses should be taxed at all? At present I do not; but when they were so overbearing, and so extortionate in their charges, I should have strongly recommended a high license fee; however, those days have gone by.
152. *By Mr. Gordon*: Competition regulates their charges, as it does everything else? Yes.
153. *By Mr. Lord*: Do you not think you confer a benefit by allowing a man to have a Bonded Store? Yes.
- 154.

154. Do you not think he should pay for that benefit? We cannot come at a correct basis for a charge. I have already stated that I think the Bonded Storekeepers would willingly pay a tax for the privilege. For instance—if I built a store on the Circular Quay, and made application to the Collector of Customs for a license, and he said to me that I had to pay so much as a license fee, I would pay it willingly, for the sake of the advantage it would give me.

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155. Do you not think that, under any circumstances, where permission is given to the proprietor of a store to bond goods, he should be charged a fee for that permission? I cannot forget the difference between the values of Bonded Stores.

156. That is his business; but do you not think that, as the proprietor of a Bonded Store, he ought to pay the Government some tax? Yes; I said before that I think they would be willing to pay for the privilege.

157. *By Mr. Weekes*: Is not the bonding of goods a public benefit? Yes, a very great public benefit. If a merchant imports fifty hogsheads of brandy, it may not be quite convenient, and indeed would be highly impolitic, for him to pay the duty at once; and, therefore, it is a great benefit to him to be able to let the goods remain in bond until he sells them, and then the purchaser pays the duty.

158. Then on what principle is it just, that a man who goes into a speculation for the public benefit should be subject to a tax? Only on the principle that it is a source of income to him, which he would not otherwise possess.

159. *By the Chairman*: He has an advantage over a person who is not licensed? Clearly so.

160. *By Mr. Weekes*: Is there any difficulty in getting a license for bonding goods? Very great difficulty indeed, because it involves an additional expense to the Government, as there must be a Locker appointed to it.

161. What would be the consequence if all the present holders of Bonded Stores withdrew from the trade, in consequence of the tax upon them being so large? I cannot conceive the possibility of such a thing. It would be such an act of lunacy, that it is not possible to occur, because their capital, their income, and their interest, are so identified with these particular goods that are in their stores, that they cannot abandon them.

162. I take it that if individuals were to decline to go into a business of this kind it would be the duty of the Government to do it, as the necessities of commercial men would demand—? They would demand that the Government should have some store to receive their goods.

163. *By Mr. Gordon*: Because they are not likely to withdraw, would you impose a tax on them? I have already stated, as a principle, that it would not be fair to charge a fee to a person applying for a license. If we were setting out in a new city it would be fair and equitable, and it would be acknowledged, and readily responded to, by applicants, that they should be charged a license fee. But, under present circumstances, I know of no correct basis on which you could go to charge a license fee.

164. *By Mr. Weekes*: Instead of imposing a tax on the keepers of Bonded Warehouses, which might react upon the rent they would charge to the public for storing goods, and so increase the expenses attending commercial operations, would it not be better policy, looking at the question in a commercial point of view, to fix a reduced scale of rent to be demandable from the public? I do not see how you can legislate on men's private arrangements; but if it were a Government building, of course you would regulate the charges by law.

165. *By Mr. Buckley*: If Bonded Storekeepers were charged a fee of £50, do you think they would increase their store rents? I think an annual payment of £50 would be looked upon as a nominal charge, and would not be objected to. I would further say, that if a person owning such a store could not afford to pay £50 a year for the privilege of being licensed, it would be better that the store should be dispensed with, and it would be a convenience to the Customs' Department if it were so.

166. Is it your opinion that if this fee were charged it would reduce the number of Bonded Stores? In one or two instances it would cause them to be discontinued.

167. And the revenue would be benefited in proportion by lessening the number of officers? No doubt.

168. In the event of such Bonded Stores as Aldis's, Leigh's, and others of the smaller stores, being given up, would it be any public inconvenience? No, it would not be a public inconvenience, but it would be a private injury.

169. Is it likely such a fee as that would induce them to give them up? Some of them it would. No doubt it would cause a great deal of inconvenience to persons like Aldis and Leigh. The permission to bond in their own stores has been a saving and a great convenience to them.

170. What kinds of locks are there generally on the doors of Bonded Stores? They are generally very good locks.

171. Are they stock locks generally? Yes, those belonging to the proprietors.

172. What description of lock is used by the Locker? Generally a bar and padlock.

173. Does the crossbar cover the keyhole of the storekeeper's lock? I cannot say at this moment.

174. Have you known of any instances of duplicates of the keys held by the Customs being in existence? Of my own knowledge, none.

175. Are they a common description of padlocks? No, generally a superior kind of lock.

176. Have any instances come within your own knowledge of the transfer of packages of cigars into different packages, those that were bad into good packages, and *vice versa*? Only by hearsay.

177. Do you know of spirits having been transferred in a similar way? It scarcely amounts to knowledge, but I have heard it rumoured.

178. *By the Chairman*: Did you ever hear of a quantity of tea having been delivered by a Locker without payment of duty? Yes. No doubt stores have been left open at times so that Tom, Dick, or Harry could go into them; but that is the fault of the officer. According

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- to rumour—and I believe in the truth of the rumour—spirits have been changed from one cask to another; brandy of an inferior character—  
179. *By Mr. Buckley:* Spanish? I would not say Spanish—has been put into casks bearing a better mark; for instance, I have heard of brandy of a quality not so good having been put into Martell's casks and sold as Martell's.  
180. That mode of deception, you think, has been practised in Bonded Stores? I have heard of such things, and I believe in the rumour. But I am quite sure that such things have never occurred in some of the Bonded Warehouses.

THURSDAY, 11 DECEMBER, 1856.

Present:—

MR. BARKER,  
MR. HOLT,

MR. IRVING,  
MR. NICHOLS.

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

George Thornton, Esquire, J.P., called in and further examined:—

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- By the Chairman:* You are acquainted with the business carried on in the Long Room at the Custom House? Yes, intimately.
  - I suppose you transacted most of your business in that room yourself? Yes; the principal business of the department is transacted in the Long Room.
  - Do you think any improvement could be made in the business of the Long Room, with reference to the entries of goods? I cannot myself see the necessity of keeping up the system of an account of imports and exports, which necessarily involves a great amount of labor. The only object for which these accounts are kept, I imagine, is for statistical information, and that could be obtained in another way.
  - How many clerks are employed on that duty? I think there are two or three clerks constantly employed. It is just so much paper and so much time used unnecessarily. Every bale of goods, case of hats, trunk of boots,—with all particulars,—ship, master, port, date, value, description, importer, and so on—must be entered several times over; and copies of those entries are sent to other places. I do not see the object of it; I seldom see any statistical information arising out of these things.
  - How many Officers of Customs do entries for free goods pass through? The entries for free goods employ, at least, one clerk; and those entries are very obstructive to the public convenience, and the business of the public, because, although there are no duties leviable on those free goods, unless the officer has an entry passed through the Customs, shewing the marks and numbers, and all other particulars, they are not allowed to be landed, and much inconvenience arises in consequence.
  - Free goods have to be entered, and a warrant obtained for their discharge from the ship, in the same way as dutiable goods? Yes; they have to pass through a long routine, in my humble opinion, wholly unnecessary.
  - Does it take up much of the time of a merchant's clerk who attends to make these entries? Yes.
  - He has to draw out two copies of the entry? Three copies.
  - Do you think the ship's manifest, and the report of the consignee, would be sufficient entry in the case of free goods? I think free goods should be allowed to pass without any notice whatever. The Landing Waiter, if a proper and zealous officer, could, at all times, prevent dutiable goods being landed under the head of free goods.
  - Do you think the course suggested in the following paragraph, from the Report of the Committee of the House of Commons, in 1852, on the Board of Customs, is a good one:—  
“That the ship's manifest, and the report of her consignee, be the sole entry required in the case of free goods; that a copy of them be sent to the Landing Waiter as his warrant, and that the information for statistical purposes now obtained from the merchants entering goods, should be given by the ship's consignee from the freight account”? That is my opinion exactly; I adopt every syllable you have read.
  - Here is a suggestion from the same Report, which I will take your opinion upon:—“In order to dispense with the entry for goods (all now free) outwards, it has been suggested to your Committee, that every shipper should send to the agent for the ship a bill of lading, containing on the back the information required for statistical purposes, which is the sole point that concerns the Customs; and that, from the number of those documents, composing a cargo, the ship's agent should be bound under penalty to make out one content, to be delivered at the Custom House within a reasonable time after the departure of the ship”—do you think that would furnish sufficient statistical information? It would furnish it fully and completely, and save an immense amount of labor. The only export account then necessary, would be that for goods under bond and goods under drawback, which form a very small portion of the exports of the Colony.
  - Can you suggest any amendment in the despatch of business in the Long Room, with the view of dispensing with unnecessary forms? The matters you have already questioned me upon would have the effect of lessening or dispensing with unnecessary forms to a very great extent.
  - You are aware that the Collector alone manages the Customs' Department now? I am aware of it.
  - Do you think it desirable that there should be a Board of mercantile men to assist the Collector in matters connected with the Customs? I could not too strongly recommend such a course. It would be highly conducive to the public convenience, and beneficial to the Government,



Government, and to every body concerned, especially the Department itself; because it would relieve the Collector of a great many duties which now necessarily devolve on him; he has to give so many audiences, to answer so many questions, and to decide so many matters which should properly come before a Board, that he has not time to attend to the details of the Department. While I think of it, I would suggest an improvement that might be made in the Long Room in one respect: I think the hours of attendance are too limited for the public convenience. I think from ten until three—and those hours never kept punctually, according to practice—are not sufficient for the public convenience.

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15. What hours would you recommend in summer and winter? In summer from nine until four, and in winter from ten to half-past three, or somewhere thereabouts. Indeed, I see no reason why the hours should not be from nine to four all the year round. It would very much tend to facilitate the business of the public, and keep the Department itself in better order, because if the clerks' duties are put off from day to day, as they often are when the office is closed at three o'clock, these backward matters necessarily accumulate.

16. Is there any means of clearing a ship after three o'clock in the day? My practice was, when from unforeseen difficulty a ship could not be cleared within the time—and the time was more limited than even you have mentioned, during my career, at any rate—my practice was generally to refer to Colonel Gibbes himself. I always found him the readiest and most willing in the whole Department to oblige. I never had a refusal in my life from him to oblige any proper request. I cannot say so for all the other officers of the Long Room. On payment of a fee we could get a vessel cleared.

17. *By Mr. Irving:* Who got that fee? The clearing clerk remained beyond the time, and of course he was paid for his overtime.

18. *By the Chairman:* What used you to pay? I think half a guinea, but I am not clear about it.

19. Do you think it desirable that a clerk should remain after hours for the purpose of clearing ships? I think that, if my suggestion were adopted with reference to the hours, these matters could not possibly arise, that is to say, if the office were kept open till four o'clock. There is no reason in the world why any clerk there should leave his office before four o'clock. Speaking of the Chief Clerk, when I was there, and some of the out-door officers of the Department, they were most uncouth and disobliging.

20. *By Mr. Holt:* Who is the Chief Clerk? I do not allude to the present Chief Clerk, but the Chief Clerk when I was there. Some of the other officers were particularly disobliging. I will take this opportunity of saying that I believe the hardest-worked man in the Department, for the great number of years I was there, was the Collector himself; he was always employed, from the moment he went into the office—and he was generally there the first—until he left. I am quite sure he did more than any two men in the Department; and he was the readiest to oblige any one, were he humble or otherwise. The establishment of a Board of Customs would relieve him of a great deal of trouble in granting audiences, and other public matters. A great amount of time is taken up in that way.

21. *By Mr. Irving:* Your remarks tend to the belief that they are not good clerks in the Custom House? I am speaking of my own time. Some of the clerks, and especially those in high authority, were most uncivil and disobliging to the public—a great portion of whom I represented in my business. I have known instances where a team has been waiting for one package of tobacco, perhaps, to complete a load, when a single stroke of a clerk's pen on a piece of paper would have been sufficient to pass it, and when delay was of great consequence—perhaps on a Saturday, when the team would be detained, at great expense and inconvenience, until the Monday, for want of this package—and he has refused it, notwithstanding the matter has been urged to him time after time; and the consequence has been that the team was compelled to wait till next day, or perhaps Monday, at a great amount of expense and annoyance. Therefore, I say that in my time I have received a great amount of want of courtesy from some of the officers of the Department. Of late years I am quite sure the discipline and routine of the Long Room has been very much improved. A system has been adopted. In former years there was not much system, but of late years there has been a system, and matters have been going on with much greater order and regularity. But still there is great room for improvement, and nothing will improve it more than to increase the hours of attendance, and to have a Board of Customs.

22. *By the Chairman:* You are aware, I believe, that the original importer of goods is liable for all duties thereon, however long they may remain in bond? I do not think that is the case, with due submission to you as a lawyer. I think the law is that if he accounts for those goods within a given time then the obligation becomes void. He enters into a bond that he will warehouse them, and if they are properly warehoused, and properly accounted for, I think his liability ceases as the importer.

23. That is your impression? That is my impression of the law. I may be wrong, of course. For instance, if I were to import ten kegs of tobacco, and warehouse them in Campbell's stores, I would give a bond that I would pay the duty, or otherwise properly account for them. I think that is the nature of the bond. If they were stolen I should not be liable for the duty if I could account for them; and the bond would be void as against me, even though a third party smuggled them. As the importer I would not be liable to the consequences of such smuggling, either as regarded the duty or the penalty for smuggling.

24. Is there any regulation as to importing packages of particular sizes? No.

25. Packages of all sizes are imported here? Yes.

26. Are you aware that that is not the case in America? I am quite aware that is not the case in America. The size of the packages is regulated.

27. Do you know what is the course when a seizure is made of smuggled goods? As regards the goods, or do you mean the practice from beginning to end?

28. When an officer seizes a quantity of goods what is done—how is the matter adjudicated? They are locked in a store, called the Queen's Warehouse, for security, until the matter is investigated.

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investigated by the proper tribunal—whether it be the Magistrates at the Police Office, or the Collector himself—and if the seizure be a proper one, the goods are condemned and sold, the proceeds of the sale being divided in proportions regulated, I think, by law, or by a regulation of the Customs, which, of course, has the effect of law, namely, one portion to the informer, I think a portion to the seizing officer, and a portion to the Queen.

29. Supposing a man is detected smuggling, and the Collector exercises the power which is given him, and allows the information to be compounded for a certain payment by way of penalty, who distributes the money then? The Collector would have the control of it, I think, but I am not aware of the fact.

30. Do you know anything of the practice followed in shipping spirituous liquors on board steamers? Yes.

31. Do you know that the steamers trading between this Port and Victoria take their spirits out of bond duty free that they use on the voyage? Yes; they are allowed to ship quantities of spirits duty free for their own use.

32. *By Mr. Holt:* Is there any limit? They are limited by law, but whether they are in practice I do not know.

33. *By the Chairman:* Is the quantity they can take duty free limited by law? It is.

34. Are you sure of that? I am quite sure. But if they abided by the law the quantity would be so small that it would be hardly of any service at all. It is a gallon per man per month.

35. How could they tell beforehand how many passengers a steamer would have? They are not allowed to take spirits in that way for passengers.

36. Do you not know that they do get spirits out of bond duty free for the purpose of supplying both crews and passengers? I know that spirits are permitted by the law to be shipped in bond for the use of the crew, but what the practice is as to quantity I am not prepared to say. The law contemplates the issue of spirits free of duty to the men and the Captain, but I think if it does not specially exclude passengers—it does not mention them in reference to it.

37. You know there is an establishment called the Department of the Inspector of Distilleries in this Colony, which forms part of the Excise? Yes.

38. Are you aware that one portion of the duties of that Department is carried on under the Customs Department, namely, the bonding of spirits? Yes.

39. There is a clerk for that purpose also? Yes.

40. That clerk is attached to the Customs Department? Yes.

41. Do you not think that, with a Board of Customs and an efficient person like Colonel Gibbes at the head of the Department, they might manage to carry on the business of the Distilleries there? Yes, certainly.

42. With the assistance of the usual inspectors? Yes. I am very sanguine indeed. I repeat the observation, that a Board composed of business men, merchants, would add very much indeed to the efficiency of the department in every respect and to the public convenience. It would regulate the department in all ways satisfactorily to the public and to the Government. It is impossible that Colonel Gibbes alone can do so. I believe he is the hardest worked gentleman in the country. It is quite impossible that he can attend to the detail of his own department as he could wish to do. I will direct your attention very respectfully to an office which I think is wholly unnecessary. It is called that of Landing Surveyor; and whether as regards the office itself, or the present occupant of it, they are both utterly useless and unsatisfactory.

43. What are the duties that officer ought to perform? I cannot conceive the services he performs in the department.

44. *By Mr. Irving:* What does he do? He seems to walk about with his hands in his pockets.

45. Is there more than one? Only one. He seems to me to be doing nothing from morning to night but walk from store to store.

46. *By the Chairman:* If an Inspector of Warehouses were appointed he really would have nothing to do? No. That gentleman should be employed as a Landing Waiter; that is his particular duty; he should attend to the business of landing goods. Landing Surveyor is altogether a misnomer. I cannot understand why he should be called so. He does not assist the Collector in the slightest.

47. His business, I suppose, he professes to be to go to the Bonded Warehouses and look after them? No doubt.

48. If the system I have drawn your attention to, as to the entries of free goods being provided for in some other way, were adopted, do you not think two or three of the clerks might be dispensed with? They might be made Landing Waiters of, and they would thereby be made useful to the department and to the public. I cannot conceive that an account of imports and exports is at all required, except for statistical information, and that could always be had in the manner described by yourself, by getting a content outwards and a manifest inwards.

49. *By Mr. Irving:* That would not shew the value of the goods? The value according to the present system is of such a wild and uncertain character, that if you form any foundation for an import value you form a false one. If I were passing an import entry for you for a number of packages, I would guess the value, and have always done so. Therefore the statistics of value are wholly false. It is all guess work. If you imported a case of drapery I might value it at £600, whereas the real value might be £35.

50. *By the Chairman:* There are no *ad valorem* duties in connexion with the Customs now? No; I think the system is abolished.

51. *By Mr. Irving:* What is your opinion of *ad valorem* duties—would they be easily levied or work well? I think that *ad valorem* duties could be worked well.

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52. *By Mr. Holt*: They are easily evaded, are they not? A rascal, a man who would have the courage to undervalue his goods, might succeed; but the instances would be very few indeed; the risk is too great; and if the law were acted on imperatively, that when a false value is given the goods should be seized and sold, there would not be many cases of fraud. I speak from an immense amount of experience. It was my particular business, and I did a very large amount of business. In theory one would be supposed to be unfavourable to *ad valorem* duties; but in practice I would offer my opinion that *ad valorem* duties are beneficial, whether as regards the importer or the revenue of the department. No doubt frauds would be attempted, but it would be the fault of the Landing Waiters if they were successful. If there were careful, sober, zealous officers, these frauds would seldom occur.

53. *By Mr. Irving*: How would you value goods—at a per centage on the invoice cost? I would take the invoice as a guide, but that is a question I am not prepared to answer. I would rather reduce the invoice than add to it.

54. Are you aware that goods are sometimes worth a hundred per cent. premium on the invoice price? I would take the value at the place where the goods were imported, at the time of entry. For instance, sugar when entered might be worth £50 a ton, then I would make that the basis of the calculation for the duty. At another time the price might be only £20 a ton, according to fluctuation in prices, and the duty should be in proportion. I do not think duties collected in such a way would be oppressive. If any dispute arose, the matter might be very easily settled by referring it to arbitration instantly, or the Board of Customs.

55. *By the Chairman*: The Board we have spoken of might arbitrate in matters of this kind? Yes, they would be most useful.

56. Can you form any idea what revenue might be derived from *ad valorem* duties in this Colony? The amount of revenue would depend entirely on the duty to be imposed. You would have to fix your duties so as to operate equitably on the different kinds of goods. Sugar should be so much per cent.; jewellery, so much; drapery, so much. You would have to regulate the charge by the character of the goods. That would be a matter for inquiry by a Committee whenever such a Bill might be brought before the House. There is another thing—I cannot see why the tonnage duty on ships was taken off. It was never objected to, and cheerfully paid. They got the *quid pro quo* in the shape of police protection and lighthouses. There is no port in the world adopts the same principle. All the captains of ships that I have been doing business for, never yet made an objection to the charge. It was nominal in itself, but in the aggregate of large amount.

57. Have you heard masters of vessels complain of any delay that they have been put to at the Customs' Department, by having to run to and fro to the Shipping Master's Office, the Water Police Office, and so forth, to get their business done? These establishments have been mostly in operation since I have left the Customs, and I am not prepared to speak on the point. The Shipping Master's Office I do not think was in existence during my career.

58. Can you give the Committee any suggestions as to reductions in the number of officers and clerks in the Customs' Department? I think there are too many clerks, and that their duties are incorrectly divided; here again a Board of Customs would be useful, to regulate the numbers and the duties of the clerks, &c. By extending the hours, as suggested before, a great saving in time would be effected, and the public greatly inconvenienced.

59. Have you looked through the scale of salaries in this Return, which was laid on the Table of the House last year? These are not the salaries at present paid.

60. *By Mr. Holt*: The gold increase would be in addition to those salaries? Yes. (*Reference was here made to the Estimates for 1857.*) The salaries are large considering the hours of attendance. I think they should give their services from nine to four for such high salaries.

61. *By the Chairman*: You are, of course, acquainted with the amount of work performed by mercantile clerks, and with the general rate of their salaries—do they range at a higher or a lower rate than those proposed in this estimate? I think generally at a lower rate, and they give a much greater amount of service.

62. What are the ordinary hours in merchants' offices? From nine till five, and they often have to work at night.

63. *By Mr. Irving*: Would the clerks in the Custom House bear a comparison with merchants' clerks in point of ability? I think not.

64. *By the Chairman*: The merchants' clerks possess a greater amount of talent? Generally, and they have to work harder.

65. And they are entrusted with more arduous and responsible duties? Yes they are; I know some merchants' clerks who could do the work of two or three of these. I see that some of these parties have been appointed by the Lords of the Treasury; and I fancy they have been made without reference to the ability or fitness of the parties. The Lords of the Treasury used to appoint some favourite, and send him out here with a good berth, to the exclusion of our colonial appointees. There are some of the officers named here who are really praiseworthy and efficient men, and others who are the very reverse. I could take each man and paint his character to life. A Board of Customs could regulate all these difficulties, and obviate all these unpleasanties.

66. *By Mr. Irving*: They would dismiss an incompetent clerk? Not only that, but if a man were dismissed for being drunk, he would be dismissed at once, and for ever.

67. *By the Chairman*: Have you known men who have been dismissed from merchants' offices for drunkenness, and bad conduct, to be taken into the service of the Customs? No.

68. Have you heard of men being dismissed for drunkenness, and afterwards being taken back? I have known such things to be reported.

69. You know Colonel Gibbes is a very good natured man, and therefore he is likely to forgive? He is the most gentlemanly, kindhearted man I ever knew in my life.

70. Are these Baggage Searchers of any use? No, they are of no use. Their duties could and should be done by the Landing Waiters.

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71. Can you tell us anything about the eleven boatmen put down in this Estimate for 1857—is there any necessity for so many? I think not, unless it includes the Coast Waiters' boatmen; they must necessarily have a boat and crew, and if it includes them there are not too many. A Customs boat is absolutely necessary in Sydney; the crew should consist of four men, one of them being the coxswain. It is important that every ship should be boarded immediately on arrival, and certain information afforded, her name and other particulars, which are of great importance to the mercantile community.
72. How do you account for the variation in the Locker's salaries, from the first down to the ninth Locker—are not the duties of one Locker the same as those of another? There is no difference in the duties. Here again a Board of Customs would be useful. Some of these Lockers on whose certificate the duties have to be paid are not competent. The appointment should involve a correct knowledge of arithmetic at least.
73. *By Mr. Irvin:* They should be examined first? They should be examined before a Board, to see that they understand fully the principles of arithmetic, gauging, &c. During my time, I knew more than one Locker who could not add up a column of figures, and could not gauge a cask properly, although they had to certify.
74. *By the Chairman:* What are these Warrant Messengers? They are concerned with the entry for free goods. When a warrant is granted for landing goods, they employ one of these messengers to take it; they will not let the merchant's or Custom House Agent's clerk do it, I do not know for what reason, and this messenger may be an hour, or two hours, or three hours, according to his own fancy, in delivering it to the Landing Waiter; whereas if the Custom House Agent's clerk could take it, it would be done in a few minutes. But this is one of Mr. Barnes' improvements.
75. What is the object in refusing to give it to the Custom House Agent's clerk? I do not know, except it is that it obstructs public business.
76. You do not think these Warrant Messengers necessary? No.
77. I asked you, on a former occasion, whether you knew of any rules or regulations having been issued by the Government of this Colony for carrying on the business of the Customs' Department? I know there are Customs' Regulations.
78. They were issued by the Lords of the Treasury? They were.
79. Do you not know that those regulations were withdrawn when the Customs Department was handed over to the local Government? There was a colonial enactment passed, adopting nearly all those rules, I believe.
80. Do you know whether any fresh rules have been issued by this Government for the management of the department? I think not.
81. Do you not think it desirable that such rules should be made, and that the hours of attendance, the duties of the clerks, and the opening and shutting of the Bonded Warehouses should be regulated, so that the public might know them? Yes, and not only so, but all matters of detail, which this Board I have so often spoken of could so well regulate.
82. *By Mr. Holt:* Do you think a Board composed of merchants, who have so much business with the Customs, would be a fair and impartial Board? I would not confine it to merchants wholly; I said that hastily, perhaps. There are many persons who have retired from business who would be glad to devote their time to such an occupation.
83. *By Mr. Irving:* You think it desirable that some persons possessing mercantile knowledge should be on the Board? Yes; for this reason, that the merchants ought not to be entirely unrepresented.
84. Supposing there were a Board of five—how many merchants would you have on it? One, at least, should be a mercantile man in active business, so that if there were any grievance on the part of the mercantile body he would be able to represent it to the Board, and take part in their discussion upon it.
85. You have already stated that you would have an Inspector of Bonded Warehouses, to whom you would give £600 a-year—in that case would you abolish the office of Landing Surveyor? Yes; but I think such an officer should have a thorough knowledge of Customs' matters.
86. *By Mr. Holt:* Do you think there are many frauds upon the revenue in consequence of there being so many small Bonded Stores? Frauds are very easily perpetrated in such places. In fact I have no hesitation in saying that they offer facilities for frauds.
87. Have you heard of good cigars having been taken out of the boxes, and their places being supplied with others that were little better than rubbish? I have heard of such things, but it amounts to mere rumour. I know that in former years there must have been a large amount of fraud carried on. I am quite prepared to say that the revenue from Customs might be increased to an enormous extent by the department being properly regulated and properly officered. I think it might be increased to a great extent by the suppression of smuggling, which has been, and is still going on, by carrying on the business in a different manner to the present system.
88. *By Mr. Irving:* You have had a good deal of experience in paying duties for different clients? As much as any person in the Colony.
89. Is the present system at all satisfactory? No, it is not satisfactory.
90. Cannot great frauds be perpetrated—for instance, when duty is paid on tobacco or cigars, whose duty is it to see that the packages are the correct weight? The Locker's; the Landing Waiter certifies to the quantity in the first instance, and when they are re-weighed for duty, the Locker is the party on whose certificate the duty is paid.
91. Do you think the Lockers are the proper persons to be entrusted with that important duty? In the majority of instances, as regards their integrity, I should say, decidedly, yes; but in some cases I should say, decidedly, no. Some of them are drunkards; there can be no mistake about that. I have heard myself, within a week, of a Locker standing up against the Colonial Secretary's Office, drunk.

92. *By the Chairman:* I find here that there are boatmen set down for Botany Bay, and other places; and it appears these eleven boatmen are for Sydney, and there is a coxswain also—do you think that number can be required? It must be a mistake, for I never knew eleven boatmen in Sydney; I have never known of more than six, and I think that quite sufficient.

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93. There is a Warehouse-keeper in the Estimate—I suppose that is the keeper of the Queen's Warehouse? No; the Warehouse-keeper is one of the most important officers and offices in the department. He has charge of all the journals and accounts of spirits and dutiable goods in the Bonded Warehouses; and he has a continual check on their being taken out. In fact, he keeps the account current of all dutiable goods in bond. He is one of the best and most useful officers, individually too, in the department; he is a very hard-working, most obliging, and attentive man.

94. Do you know of any inquiry having been held into the Department of Customs since it was handed over to the Colonial Government, in 1852? I do not think there has been any; at all events, between 1852 and 1854, when I left, I knew of none.

95. *By Mr. Holt:* When was it that the officer was sent out by the Lords of the Treasury to inquire into the department? Mr. Barnes and two clerks held a very lengthy inquiry, and elicited some information, which would be of assistance to this Committee. I think that was about ten years ago.

96. *By the Chairman:* Have you any further suggestions to make on the subject of the Committee's inquiry? I have already spoken of the necessity of a Board of Customs being appointed, and I cannot too strongly recommend it, and to be adopted as speedily as possible. Incivility, drunkenness, incompetency, and other irregularities which have characterized some of the officers of the department during my time would at least be remedied. The whole machinery of the department might be regulated, and would work well. The business has increased and will continue to increase as the country grows older, and it requires very different management now to what it did twenty, or even ten, years ago, although I can confidently say, that at the time I left (in March, 1854,) the great majority of the officers of the department were zealous, high-minded, and honorable men; those on the contrary, of whom I have before spoken, formed the exception, and not the rule. I have also spoken of the abolition of the Tide Waiters, and the propriety of extending the hours of business. I simply reiterate what I have before said. I would strongly recommend the appointment of night officers, *i. e.*, Night Watchmen, one for each wharf; they would check smuggling, if not wholly prevent it. The system has, I believe, been tried successfully in Liverpool, and prevails in other large ports—due regard to be had to the character of these men, and they should be paid a permanent and liberal salary. I would recommend every newly-appointed officer first to pass an examination as to his knowledge of all the rules of arithmetic, if not of higher sciences. As to the appointment of Inspector of Warehouses, I would suggest that that officer be selected from the department, as a thorough knowledge of the business in all its detail, as well as a knowledge of proprietors and localities, are in my opinion absolutely indispensable; besides, those who have served faithfully for many years are entitled to be selected. I could suggest many other matters of detail, but if a Board be appointed, these necessary improvements will be self-evident from time to time, or failing to adopt my suggestion as to the appointment of a Board, I think if a Comptroller were appointed, he (if an efficient man) could take a great deal of the labor now necessarily devolving upon the Collector; he could make a daily inspection of the officers in the exercise of their several duties, which would tend much towards the improvement of the department; this officer could also be the Supervisor of Bonded Warehouses before recommended, but let not a stranger be appointed to this office; there are gentlemen in the Department entitled to be advanced, and fully qualified in every respect to fulfil the duties of it.

TUESDAY, 16 DECEMBER, 1856.

**Present:—**

MR. BUCKLEY,		MR. IRVING,
MR. EGAN,		MR. NICHOLS.

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

Frederick Garling, Esquire, called in and examined:—

1. *By the Chairman:* You are Landing Surveyor in the Customs' Department? I am.
2. How long have you been in that Department? Since the first establishment of the Department in October, 1827.
3. You were appointed by the Lords of the Treasury? I was appointed first by the Governor, and the appointment was confirmed by the Lords of the Treasury.
4. What duties do you perform in the capacity of Landing Surveyor? I have the general supervision of the out-door department, and a check on the collection of the receipts.
5. By general supervision of the out-door department do you mean the superintendence of the Lockers and Landing Waiters? Yes.
6. Is the Warehouse-keeper under you? The Warehouse-keeper's is an in-door branch of the department. I superintend the Lockers and Landing Waiters principally.
7. How frequently do you visit these Bonded Stores? Some of them daily.
8. For what purpose do you visit them? To see that the Lockers are in attendance and attentive to their duties, and that everything is going on regularly.
9. Are the Tide Waiters under your supervision? They are more immediately under the Tide Surveyor.

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10. What hours of attendance do you give to this duty? From nine to half-past four.
  11. When these Bonded Warehouses are shut for the night who keeps the keys? The Warehouse-keeper receives them from the Locker, and locks them in an iron chest.
  12. *By Mr. Irving*: Who is the Warehouse-keeper? Mr. David Nash; he is the head of the Warehouse Department.
  13. *By the Chairman*: Who locks the Bonded Warehouses? The Lockers appointed to each warehouse.
  14. There are two locks? Yes; we have one, and the proprietor the other.
  15. When dutiable goods are taken into these stores, what is the practice followed? The Locker keeps an account of them, and has them stowed away until an order comes for their delivery.
  16. They are entered in a book? Yes.
  17. Who keeps that book? The Locker.
  18. Where is it kept? Each store has a book of its own.
  19. Kept in the Bonded Store? Kept in the Bonded Store.
  20. Is there any check on the Locker's account? Yes; the Landing Waiter keeps an account of the goods before they go into the store.
  21. What does the Landing Waiter do with his account? That is sent in to the Custom House, to an officer called the Jerquer, to go over it and see that it is all correct as to the gauging and weighing.
  22. Is there a book kept in the Custom House? Yes.
  23. Who does that part of the business? The Landing Waiter keeps his account, and the Locker his own.
  24. But when the account of the Landing Waiter is sent into the Custom House, who jerques it? A clerk named Fancourt is the Jerquer at present. The Customs' Warehouse-keeper keeps the account sent in by the Landing Waiter; he has a set of books taken from the Landing Waiter's accounts.
  25. *By Mr. Irving*: Could you go to the Custom House, and, without looking at the Locker's book, tell what goods were in a particular warehouse? Yes; there is a record kept in the Warehouse-keeper's office.
  26. *By the Chairman*: Is there a record kept in the Warehouse-keeper's office of the goods taken out of bond? Yes.
  27. So that his account acts as a check upon the Locker? Yes.
  28. There is no further security about these warehouses than what you have stated about the locking? No.
  29. If the Locker left his lock unlocked, the Warehouse-keeper could take out what he liked, if he was that way inclined? Yes.
  30. How long do goods remain in bond before they are sold? Three years, by law.
  31. Is there any stock actually taken before they are sold? Yes, we occasionally take stock.
  32. How often? About once in three years; there is no particular time.
  33. Are goods that are sold at overtime sales sold by the books or from actual stock-taking? They are from actual stock-taking; the packages are found before they are advertised for sale.
  34. And examined? And examined.
  35. Who does that duty? The Locker.
  36. The same Locker who attends the store they are taken from? It may be, or it may not, because we change the Lockers occasionally. It does not follow that it is done by the same man; in fact it is most likely not.
  37. How many Bonded Warehouses are there in Sydney? Twenty-two.
  38. Is it possible for you to visit the whole of these daily? No, I do not visit all of them daily, but part of them daily.
  39. Then some of them are entirely without your supervision for one day at least? Yes.
  40. Do you not think it would be more convenient to the public if there were one large Bonded Warehouse, belonging to the Government, in which all dutiable articles could be placed? I do, decidedly.
  41. Do you think it would be more profitable to the Government than to have these private Bonded Warehouses? I can hardly answer that question, for I do not know what the expense would be.
  42. The Bonded Warehouse-keepers make a profit, of course? Yes.
  43. Can you tell what profit they make annually? I have no idea at all.
  44. Independently of being more convenient to the public to have one place in which goods should be bonded—under a proper Inspector of Warehouses, having a staff of Lockers under him—do you not think it would prevent anything like dishonesty being practised? I do not think it would be any greater check than at present.
  45. What check have you now; supposing by chance any dishonest person got into a Bonded Warehouse, and managed to steal away the contents of a hogshead of brandy, would it not be said to have leaked out? The cask would tell for itself. Whenever a cask is found empty we hold a survey on it, to ascertain whether it has become so by plunder or by leakage. The cask will always tell.
  46. *By Mr. Irving*: Even twelve months afterwards? Any time afterwards.
  47. If it was quite dry? I could tell whether it was from plunder or not; I could see whether there had been a spile put into it.
  48. Did you ever know of spirits being taken away from a cask in Unwin's store, through the window, by means of a syphon? There was an instance, some years ago, before I was Landing Surveyor.
  49. You would be much astonished if evidence came out that it is the system to plunder in this way? Yes.
  50. You would not like to say it is not done now and then? I think, if it were done, I must know of it.

51. If you only take stock once in three years, could you tell whether a cask had leaked out, or whether the spirits had been drawn from it? Not if it had been empty two or three years, perhaps.

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52. Could you tell after twelve months? Perhaps not a twelve-month afterwards.

53. I will put it to you whether six months afterwards you could tell—it would not be done by means of a spile, or anything of that sort; they would take the bung out, would they not? That could not be done without collusion between the Warehouse-keeper and the Locker.

54. That is another thing—could you tell six months afterwards, if an empty cask were found all mouldy, whether the spirits had been drawn off or had leaked out? I do not think I could, after such a length of time.

55. *By the Chairman:* Have you ever heard of spirits being changed in the Bonded Stores, one description being put into a cask out of which another description had been taken? Never; it is not allowed.

56. If such things have happened, of course, if you had found it out, the parties would have been prosecuted? Decidedly.

57. What is the practice when spirits are taken out of bond for home consumption? They are ganged before the duty is paid.

58. By whom? The Locker.

59. Is he paid for that? No.

60. He is not paid by the merchant for re-gauging? Not for re-gauging for duty.

61. Is he ever paid for re-gauging for sale? He is, for sale, sometimes, if he has time to do it before or after hours.

62. He re-gauges and then gives a certificate of the quantity and strength when duty is paid? Yes; and upon that they pay the duty.

63. Are these Lockers mostly respectable men? Yes; I consider them respectable men.

64. Are they pretty well educated—do they possess sufficient qualifications to perform this duty? Yes; they are subject to examination before they are put on duty.

65. Who examines them? I examine them on gauging; that is the principal thing they have to learn—the only thing, I may say. They are put under instruction the same as the Landing Waiters.

66. *By Mr. Irving:* Then you have never appointed any one who did not understand gauging? I am not aware of any such appointment having taken place.

67. Do you examine them before or after their appointment? They are examined before they are put on pay.

68. After the appointment? After the appointment.

69. Did you never find any of them deficient in the necessary knowledge of gauging? I have been obliged to put one under instruction a second time after admitting him; I found he was not sufficiently competent.

70. Has that happened in only one instance? I only recollect one instance.

71. You think it impossible there could have been more, because it is your duty to examine them? Yes, the Lockers.

72. All the Lockers? Yes. At times, during the absence of a Locker, we have been forced to send a Tide Waiter to take temporary charge of a store, and, perhaps, he has not been able to gauge.

73. What course is pursued then? He sends to me, and I send a Landing Waiter, or some competent officer to gauge when it is necessary.

74. Then it is not within your knowledge that it is sometimes left to the merchants to gauge themselves? Never.

75. If it is done you are not aware of it? No; we never take the merchant's gauge; the re-gauge order requires the signature of an officer of the department.

76. *By the Chairman:* These Bonded Warehouses are open at certain hours at different times? Yes; the larger ones all day, according to their capacity.

77. Do you not think it would be more convenient to the public if they could have access to their goods at all times during the day? I do not see that it would; I have never heard any complaints.

78. *By Mr. Irving:* Are not some of these Bonded Stores inconveniently out of the way? It would be much more convenient if they were not so scattered.

79. Are these all public Bonding Warehouses? Yes.

80. All of them? All of them.

81. Are not some of them private, that is, they do not take in any but their own goods? The Collector allowed some persons to have private Bonding Stores, but it was disallowed by the Board at home.

82. Do you see that chapel opposite—is not that a Bonding Store? The under part of it is.

83. Below the chapel? Yes.

84. *By the Chairman:* Do you know anybody who bonds goods there except the owner of it? I do not believe there is anything in it now. He applied for that temporarily when there was such a rush of imports that we had not room to put the goods anywhere.

85. *By Mr. Irving:* That chapel was once the notorious Tawell's chapel? I am not aware.

86. What was done with all the tobacco and cigars when they were swimming there some little time ago, after the heavy rain? They were condemned as worthless, and destroyed.

87. Who destroyed them? The proprietor of the store, in my presence.

88. Were you present when all were destroyed? Yes.

89. The whole of them? The whole of them. If I was not personally present there was an officer of the Department present.

90. Then you were not present when they were all destroyed? I think I was, to the best of my recollection.

91. *By the Chairman:* Do you know what quantity was destroyed? I have no recollection just now without referring.

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92. Do you keep an account of the quantities of goods destroyed? Yes; the Warehouse-keeper keeps an account of all that have been destroyed.
93. What is done before warehouses are authorised as Bonding Warehouses? They are examined, to see that they are sufficiently secure in every respect.
94. Who examines them? I do.
95. Do you give any certificate? No written certificate. I report to the Collector that I consider them sufficient.
96. Verbally? Yes.
97. Have you any rules or regulations for the guidance of your Department issued by the Government or the Collector? There are instructions issued by the Treasury at home.
98. Do you not know that they were withdrawn in 1852, when the Department was handed over to the Colonial Government? Yes; I am aware of that.
99. Have there been any issued since that time? No.
100. Do you not think it desirable that proper instructions should be given to every superior officer as to the performance of the duties of his Department? Yes, I think so; but we have acted up to the former instructions hitherto.
101. You have carried on the business in the same way? Yes.
102. When spirits are taken out of bond for exportation, what is done with them? They are shipped in the presence of an officer—one of the Tide Waiters; he gets the mate's receipt, and endorses the warrant that is issued as shipped by himself.
103. Are there any means of preventing these spirits from being taken out and put on shore again? No.
104. Then, supposing a person to be dishonestly inclined —? He might land them again; but, in that case, his bond would be put in suit.
105. Have you heard of large quantities of spirits being shipped as for New Zealand and landed again? Many years ago.
106. Not latterly? No, not for some years.
107. There is not much smuggling going on, in your opinion, just now? I do not think there is.
108. You think the present rate of duty may have prevented that? I think that is one reason.
109. Are any of these spirits shipped for exportation allowed to be taken away on deck? The officer who is shipping them ought to see them put below.
110. You know the steamers trading from here to Port Phillip, and trading coastwise to Moreton Bay, get the spirits they use on board out of bond? Between here and Melbourne they do; it is not a coasting voyage, being in another Colony.
111. Do the steamers from here to Newcastle and Moreton Bay get their spirits duty free? No.
112. Those are considered coasting voyages? Yes.
113. And the other you call for exportation? Yes.
114. Are these spirits shipped on board the steamers put in charge of an officer? They are always sent from the warehouse in charge of an officer.
115. Are they in charge of an officer when shipped on board the steamer? No; the officer gets the mate's receipt, and they are put in the manifest, and if they were not landed at Melbourne, the Collector there would write up to that effect.
116. What is done with respect to the spirits that are consumed on the voyage? They are shipped as stores, not as cargo.
117. Do you know what quantity they take generally? A quarter-cask of brandy, perhaps—whatever they consider they will require, according to the number of passengers.
118. The Tide Waiters are under you? They are under me, but they are more immediately under the Tide Surveyor.
119. What class of persons are generally appointed to this office? A respectable class of men. I am not acquainted with the Customs in England, but I understand they are a very superior class to the Tide Waiters in London.
120. *By Mr. Irving*: Do they find any security? The Tide Waiters do not.
121. *By the Chairman*: Do you give any bond? Yes.
122. To what amount? £500.
123. Do any of the other officers give bonds? The Landing Waiters do.
124. Have you heard any instances of Tide Waiters leaving their ships when on duty? I have heard instances, but that comes under the province of the Tide Surveyor, because it is his business to go round at night to see that they are on board.
125. Do you know of any of these Tide Waiters having been dismissed for drunkenness? Yes.
126. I see in the Estimates for 1857 there are eleven boatmen and one coxswain put down—how many boats are used in the Customs Department? Three boats.
127. *By Mr. Irving*: Where are they stationed? In Sydney.
128. What are the duties of the three? To board ships, and to take the Tide Surveyor round to measure vessels—they do the general duty afloat.
129. How many men are there to each boat? I think there is one five-oared and one four-oared boat.
130. *By the Chairman*: There is also a boatman at Watson's Bay in this Estimate? The station at Watson's Bay is done away with.
131. *By Mr. Irving*: What do these boats' crews do when there are no ships, sometimes for a few days perhaps? They are not employed at all, I suppose; but the boats are entirely under the Tide Surveyor; they have all the duty afloat.
132. Do you consider three boats necessary? At times they are not.
133. Do you think two would be necessary? I do, because there are very often vessels to measure, while the other Tide Surveyor is boarding vessels that have just arrived, or searching vessels.



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- 134. Two boats would be necessary? Yes.
- 135. How many men to each? I think five men to each boat would be necessary; they are five-oared boats.
- 136. Why are so many men required to each boat? It is a long pull from here to the Heads, or Watson's Bay.
- 137. *By the Chairman*: What part of the department has to go that distance? The Tide Surveyors; there are frequently vessels lying down there.
- 138. For what purpose do the Tide Surveyors go there? To rummage the ship, if necessary. Sometimes ships cannot come up, and then they have to go down to board them there for their papers.
- 139. The Customs boat used formerly to bring the mails ashore? Yes, we used to do that.
- 140. *By Mr. Irving*: What is this Coxswain for? He is one of the men; he pulls the stroke oar.
- 141. Do you not think he might be dispensed with? I think four men to each boat would be sufficient.
- 142. *By the Chairman*: There are two messengers in the Customs Department? Yes; inside messengers.
- 143. What are their duties? One is principally to attend on the Collector, and the other on the clerks in the Long Room.
- 144. *By Mr. Irving*: Do you mean that one attends upon the Collector as a servant? No; there are messages constantly required to be sent; he is employed carrying letters and messages.
- 145. Do you not think one messenger would be enough? No; I consider one necessary in-doors altogether. I consider the messengers are fully employed.
- 146. *By the Chairman*: There are two warrant messengers—are they required? I consider they are; to carry the warrants to the different wharfs.
- 147. *By Mr. Irving*: Why could not the merchants, or their clerks, take these warrants themselves? Because when they did so, they used to keep them back for days, perhaps, and constant complaints were made they were obstructing the delivery of the ship; the Collector then made the rule that he would send them by his own messengers. We have known entries to be passed and not to be delivered to the ship for days afterwards, before these messengers were employed. It is the London practice.
- 148. *By the Chairman*: Do you think the baggage searchers are necessary? I do not, now.
- 149. You thought they were at the time they were appointed? Yes; there were a great many foreign vessels at that time, principally Californian vessels, with a great number of passengers.
- 150. How do you account for the difference of salary amongst the Lockers—are not the duties the same? The salaries increase progressively, from the junior up. If that were not the case, there would be no promotion, or inducement for a man to enter the service. They are promoted as vacancies occur.
- 151. You know the Old Commissariat Store? Yes.
- 152. Do you not think that place might be made available as a general Bonded Store? I consider it very suitable.
- 153. Have you any idea what quantity of goods it would hold? I should say it would hold nearly all that are imported here; that is, taking both George-street and the water-side.
- 154. Do you think that would be a convenient situation for a mercantile community to have a Bonded Store in? Very much so, I consider.
- 155. Do you think it would be sufficient to hold all the spirits, tobacco, and cigars that are imported? I think it would.
- 156. Would it hold the other articles that pay duty? There are various other articles that pay duty, such as tea and sugar, which take a great deal of room in stowing—tea especially.
- 157. Do you not think parties might be allowed to bond their own tea and sugar, on giving a bond to the Customs not to remove them except on payment of duty? Yes.
- 158. That is the case at present? Yes, we frequently bond tea and sugar now.
- 159. The duty on them is so low that it would not be worth while to smuggle? No, and it is a bulky article that cannot be smuggled.
- 160. Then you think, leaving these goods to be bonded in the way they are at present, all other goods might be bonded in the Commissariat Store, if that were established as a Government Bonding Warehouse? I think so.
- 161. Do you think it would hold the Colonial made spirits also? I am not prepared to say what stock they have on hand. We have no great stock of Colonial spirits in our stores.
- 162. They are sometimes moved to your stores? Yes.
- 163. There is a clerk kept in your establishment for the purpose of keeping an account of these spirits? Yes.
- 164. *By Mr. Irving*: Does that clerk do nothing but attend to that business? I fancy not. I am not so conversant with the duties of the clerks as I am with the out-door department.
- 165. *By the Chairman*: What are the four weighers here—what do they do? They attend on the Landing Waiters,
- 166. And weigh goods taken from the ships? Yes, and make themselves generally useful at the waterside.
- 167. Do you know anything of the American system with reference to Tide Waiters and Landing Waiters? No.
- 168. Is there any locking of hatches here at night? No.
- 169. Used there not to be at one time? No, we never adopted that system here.
- 170. Is it not the practice in England? I believe it is lately, and I believe it is also at Hobart Town.

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171. Do you not think it would be advisable to adopt that course here? There are so many other openings to the hold that I do not think it would be worth while.
172. Do you think these Tide Waiters are sufficiently paid in the way they are employed now, being only paid when on duty? Their pay is twelve shillings a day—I think it ample.
173. They are sometimes off duty for a considerable time? Yes.
174. *By Mr. Irving*: What do they do for a living then? I think their pay is so ample that they ought to be able to put by plenty to live on when they are not employed, because they are at no expense when on duty.
175. The Captain of the ship feeds them, does he not? He is not bound to do it, but they always do it, as a general rule.
176. Who appoints these Tide Waiters? The Collector.
177. *By the Chairman*: Are the ships charged anything for these Tide Waiters? Not till after the number of days allowed by law has expired—twenty working days; after that the Tide Waiter is paid by the ship.
178. Do the Tide Waiters get any fees besides the Government allowance? They are not allowed any.
179. But supposing the Collector gives permission for the hatches to be open after hours? Then they are entitled to pay.
180. What do they get? One shilling an hour, I think, which the party making the application pays, whether it be the ship, the agent, or the importer.
181. How many Bonded Stores do you say there are? Twenty-two.
182. I see there are nine Lockers—how do they attend to twenty-two stores? We are obliged to have four Tide Waiters to do Locker's duty. These four established Tide Waiters are doing Locker's duty.
183. Do you not think half these would be sufficient if you had a proper Inspector and one consolidated Bonded Warehouse, in the way I have spoken of? Yes, I should fancy so.
184. *By Mr. Irving*: Are twenty-two Bonded Stores necessary? Yes; at the time some of them were licensed we had not even room in these without stowing them as full as they would hold.
185. *By the Chairman*: Supposing a warehousing establishment under one roof were instituted, all matters now done in the Customs Department, except the actual payment of duty, could be done in the warehouse itself? Yes.
186. Do you not think it would facilitate the discharge of ships greatly if they could roll the dutiable goods at once into the Bonded Warehouse? It would alter our system.
187. Do you cooper the casks? No.
188. Do you not think it would be advisable to do that? When it is necessary to cooper, notice is given to the importer, and he sends a cooper down; that is done at his own expense.
189. You are not aware of any inquiry having been made into the Customs Department since it was handed over to the Colony? Not since Mr. Barnes was here; but he was sent from Home.
190. Do you happen to have a copy of his report? No; I never have seen it. I did not hold the office I do now when he was here.
191. You are aware that the Custom House Agents are licensed? Yes.
192. Some of them have rooms in the house? Yes.
193. Do they pay anything for the use of those rooms or for the license? No.
194. Have you any suggestions you can offer for the improvement of your department? I cannot say I am prepared to make any suggestions at present. It would be advisable if we could do with fewer extra Tide Waiters, but while we continue to take an account of the free goods, which is necessary for satistical purposes, I do not see how we could do without them.
195. *By Mr. Irving*: What would be the difference if you did not take these free entries? We should have to consider what would be the best system to adopt if they were taken off.
196. *By the Chairman*: Do you know whether the Bonded Warehouse-keepers give a bond to the Customs? I think they do.
197. Is there any Act to regulate these warehouses? No, except what is in the Customs Act.
198. They can charge any rents they like? Yes; we do not recognize their rents at all; it is entirely a private affair of their own.
199. Do you not think the entry of free goods might be simplified considerably? I dare say it might, upon some little consideration.
200. Does it not give a great deal of unnecessary labor to the department and to the merchants' clerks—they have to draw out two or three entries? Three entries.
201. All for satistical purposes? Principally so.
202. Do you think the ship's manifest and the report of her consignee, if sent to the Landing Waiter with a warrant, would be sufficient in the case of free goods? The manifest would not be sufficient, because it does not give the contents.
203. Could not the consignee give that from the freight account? Not always, because when freight is paid in England no contents are given.
204. In this Colony how do you ascertain the values? Merely by the value given in the entry by the importer himself. We do not care about the values now, as there are no *ad valorem* duties.
205. *By Mr. Buckley*: You can ascertain the values from the cockets? Cockets are done away with now.
206. If it were made a rule that a merchant who has goods consigned to him should take his invoice, if required, to the Custom House, would not that be sufficient for satistical purposes? I think it would. At present we cannot compel him to do so.
207. *By the Chairman*: Supposing he were to send a bill of lading containing the information required on the back of it? That would give all the information required.
208. He would have to make out one content, as it is called, and that would be quite sufficient? I think it would.

209. What are the hours of attendance for the clerks at the Custom House? From nine o'clock till three. F. Garling,  
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210. Except on Saturdays? Except on Saturdays They are frequently later than that, but the door is closed to the public at three o'clock.
211. *By Mr. Buckley:* You think, if parties were compelled to give contents and value on the back of the bills of lading, that that would be sufficient for statistical purposes? I think it would.
212. There would be no possibility of practising deception in any way? I am not aware of any object they could have in doing so for free goods.
213. What method is adopted when a ship comes in with a large quantity of spirits or other dutiable goods? An account is taken of them before they go over the ship's side, and when they are over the side they are in the Landing Waiter's charge; he gauges them and hands them over to the Bonded Store.
214. Speaking about goods in Bonded Stores, are many packages put into Bonded Stores that leak? None are put in, in a leaky state, if we are aware of it.
215. Is it the rule of the mercantile community to be very careful in such matters? Yes, but if the importer is not present, and we find a bad cask, we give notice to him to send a man down to cooper it.
216. With reference to the Commissariat Store in lower George-street—supposing we had an immense importation of goods like we had some time ago, do you think that store would be sufficient? I do not think it would under such circumstances as existed two or three years ago.
217. Is it the practice for any one who applies for a Bonded Store to get a license, provided the building is approved of? Unless we require additional room he does not get it.
218. Would not a representation from a number of mercantile men, that it would be a convenience, be sufficient? The Collector would not grant it unless he considered it to be necessary. There have been instances where the Collector has refused a license, and upon application being made to the Government they have acceded to it, against the Collector.
219. *By the Chairman:* You conceive it would be desirable to have one Bonded Store, instead of these two or three and twenty? It would be a great convenience to the public.
220. *By Mr. Buckley:* Sugar pays duty? Yes.
221. What is the plan adopted in landing sugar? It is all weighed, and tare allowed for the bags.
222. Whose duty is it to weigh it? The Landing Waiter's.
223. Does this sugar generally go into bond? All that is entered for bond.
224. Is it the general practice for merchants to allow it to go into bond? No; some will pay the duty on a whole cargo at once.
225. You are obliged to take particular account of it? Yes, both the weight and number of packages.
226. Do merchants bond sugar in their own stores? Yes, if they hold Bonded Stores of their own.
227. Does it ever go into private stores? No; sometimes we have allowed a cargo of tea or sugar to go into what is called a special store, but we always have our lock upon it.
228. *By the Chairman:* That is authorised from the necessity of the case? Yes.
229. *By Mr. Buckley:* With regard to bonds for the payment of duty, do you think it would be advisable to take the bond of another party besides the owner of the goods? Yes, I think it would.
230. What is the amount of the bond? Double the amount of the duty.

FRIDAY, 19 DECEMBER, 1856.

**Present:—**

MR. NICHOLS,  
MR. BARKER,  
MR. HOLT,

MR. WEEKES,  
MR. GORDON,  
MR. BUCKLEY.

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

William Norman Llewellyn, Esquire, called in and examined:—

1. *By the Chairman:* You are the Chief Clerk in the Customs Department? I am.
2. You have been so for many years? I have been actually the Chief Clerk for 1855 and 1856. I was acting Chief Clerk for many years on a previous occasion.
3. You are appointed by the Lords of the Treasury? I was.
4. What are the hours of attendance at your office. The clerks are under your supervision? They are under mine and the Collector's supervision.
5. Are the clerks in the Long Room under your immediate supervision? Yes, certainly.
6. What are the hours of attendance of yourself and clerks? Perhaps I had better explain. The hours of attendance are nominally fixed at from 9 till half-past 3 o'clock. The clerks are allowed to write their names if they are detained up to 10 o'clock, or up to 10 minutes after 10 o'clock. If they arrive at the office after 10 minutes past 10 o'clock, by an arrangement that is made, they are fined? I will explain this. There is a rule in our service which exists throughout the Customs Department in England, which fixes the hours at from 10 to 3 o'clock. The Collector of Customs has the power of making the clerks who are behind with their work stay until the work is done.
7. In point of practice, the hours of attendance for the clerks are from 10 to half-past 3 o'clock?

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- o'clock? Yes; if they arrive after 10 minutes after 10 they are fined 2s. 6d., as a general rule.
8. After this hour of half-past 3 o'clock, is there any business done in the Long Room of the Customs? Do you mean public business?
9. Yes, public business? Entries are not taken after a certain hour, nor can ships be cleared, except under special circumstances.
10. What are these special circumstances? Steamers clearing out for Melbourne. I believe, that by an arrangement made by the Collector of Customs, steamers are allowed to clear out after hours. The Australasian Steam Navigation Company's steamers clear out after hours.
11. Do they pay any fee for that privilege? I believe they do.
12. Is it necessary that a clerk should attend for that purpose? Yes; a clerk does attend after hours. It generally happens on a Saturday, when vessels require an extension of time for clearing out.
13. On that day, does the Customs close at half-past 1 o'clock? No; at 1 o'clock now; that is the Government regulation. A clerk stops after that time for the purpose, and is paid for doing so.
14. Do you know at what rate he gets paid? No, I do not.
15. Does the clerk get the fee for his own use? Yes. May I be allowed to explain this. I was never in the Customs Service in England, but I believe the practice sanctioned by the Lords of the Treasury is to allow all Officers who work over-time to be rewarded for anything they do.
16. *By Mr. Barker:* And to charge what they like? No; the rate is fixed by the Lords of the Treasury and the Board of Customs.
17. *By the Chairman:* This fee was fixed by the Head of the Department—by the Collector of Customs? No; I cannot say that.
18. Is it a matter of arrangement between the clerks and the ship? No; they are paid at a certain rate for over-time, but I do not know at what rate.
19. There are eleven clerks, including yourself, in this Department? Yes.
20. Do you find work enough for all these clerks? Yes, generally speaking.
21. Are they always employed? The Cashier may be very busy, and then be disengaged for a short time, so may the Clearing Clerk, and the Clerk for Free Entries. There may be, for instance, ten or twelve people waiting to pass their entries, and then it will be as much as he can do to attend to them. After that he may not be so fully employed, but in an hour afterwards, perhaps, there is another press of business, and so on. They never know when the merchants intend coming. They are not idle at any time, though they may not be fully employed.
22. You mean by free entries the entries of free goods? Yes.
23. How many clerks does that employ? Generally the time of one clerk.
24. Is not the time of more than one clerk employed in passing free entries? He may call for assistance if he is very busy. The clerk who passes these entries now is the Distillery Clerk, and he combines with that business the making out some other returns for the Distillery.
25. Does he do so now? Yes.
26. He is not a clerk of your Department? No; he is the Distillery Clerk.
27. He is not paid by you? No, not up to this time, but he will be by the Estimates for next year.
28. That will make twelve clerks in this Department. This Distillery Clerk was appointed specially by Sir George Gipps to attend to the Distilleries.
29. That is that part of the business of the Distilleries which relates to the bondage of goods, and taking them out of Bond? Yes; this clerk is placed under the control of the Collector of Customs.
30. This Distillery business does not occupy all his time? No.
31. Is he engaged all the day in this particular business of bonding goods? No.
32. How many hours could you say he was so engaged? I cannot say. He also passes free entries, and prepares accounts for the Distilleries. He makes a return of spirits and tobacco, showing the receipts and issues of stock on each day, and at the close of the week. He also makes a return of the passengers arriving, for the Blue Book.
33. He has time to attend to passing these entries of free goods? Yes.
34. How is that done? By the merchants' clerk and the Agent.
35. How many entries do they have to make? The law requires a warrant and Bills of Entry rendered in such number as the Collector may require; generally we have a warrant and two entries.
36. That is three documents. Are these documents only used for statistics? Not only for statistics, but also for the supervision of the Landing Waiters. I believe in passing free goods these entries after being passed, are sent down to the wharfs to the Landing Waiter, who looks at them to see they are correct, and he hands them to the Tide Waiter to take charge of; after this the entries, with the warrant, are forwarded to the Jerquer. The Jerquer then goes over these documents, and strikes out of the manifest all the goods that are marked correct. If there is anything on which duties have to be collected, and which are not marked, he writes to the agent or the master of the vessel on the subject.
37. Have you ever known an instance of free entries being passed for dutiable goods? Yes. I have known, through inadvertence, that perfumery has been passed for free goods.
38. Perfumery contains strong spirits? Yes.
39. Have you known that free entries have been passed for any other reason besides inadvertency? No; it is not a common occurrence.
40. May not free entries have been passed for the purpose of fraud? Yes, they may have.
41. Do you think some plan could not be invented for abolishing these free entries? I think not—not with safety.

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- 42. Why not allow the master of the vessel, when he makes his report, to state the quantity of goods, and the number of packages, and what they contain, so that each merchant could come down and pass his entries, and there would be an end of the matter? The Government have adopted a system that all Bills of Entry shall be passed in triplicate. You could not do what you suggest unless the law were altered, but I should not advise that.
- 43. Do you think the ship's manifest, and the report of the consignees, and a copy of his papers, sent to the Landing Waiter as his warrant, would be sufficient, with a copy of the freight for statistical purposes? You mean to alter the law, then, I presume?
- 44. Of course. The packages will require to be enumerated in the Bill of Entry; the consignees of the goods are also enumerated, the value of the goods, and to whom they belong—that is, that the Bill of Entry of every shipper sent to the agent should contain all the particulars required for statistical purposes, and he should be bound to make out these particulars under a penalty—would that be sufficient for statistical purposes? Anything would be sufficient which would give the information the Department required.
- 45. Are not these documents principally used for statistical purposes? Yes.
- 46. Would not the system I have suggested facilitate the despatch of business, and relieve them passing all free entries? Yes, if you could do it with safety.
- 47. Would that relieve you from keeping so many clerks? One might be dispensed with.
- 48. Can you tell us what the other clerks are employed in—what is your own particular duty? I made out a Return of the duties of the clerks, which is rather voluminous, and forwarded it to the Committee.
- 49. To whom did you send it? To Mr. Calvert. This document contains a full epitome of the duties of the clerks.
- 50. *By Mr. Gordon*: At what time did you say the business of the office was over? At half-past three o'clock the clerks are allowed to leave.
- 51. Is public business carried on to that time? Up to half-past two o'clock entries may be passed every day, except the Treasury day, when all entries by which duties are paid must be passed at an earlier hour, so that the money may be forwarded to the Treasury before half-past two o'clock, together with the statements for the same.
- 52. You have got a Warehouse-keeper as well? Yes.
- 53. How many clerks has he got under him? Three clerks.
- 54. Is that included in the eleven? Yes, they are included.
- 55. How many clerks sit in the Long Room? The Long Room contains six—myself and another gentleman, who have particular duties, sit in another room. Perhaps I had better explain this. There are three clerks who sit out of the Long Room: the Chief Clerk, the Registrar of Shipping, and the Copying Clerk—they are all Long Room clerks, although they do not sit in the Long Room; the Cashier, the Drawback Clerk, the Clearing Clerk, the Jerquer, the Statistic Clerk, and the Distillery Clerk, all sit in the Long Room.
- 56. *By Mr. Holt*: What does the Drawback Clerk do? He passes the drawback debentures, frames the export statistics, and prepares the statements for paying the Customs' receipts into the Treasury.
- 57. Is it necessary to have a clerk for this purpose? Yes.
- 58. *By Mr. Gordon*: Is he fully employed? At times he is fully employed.
- 59. There are days at a time when there are no drawbacks? Then he frames the abstract of the payments in the Treasury, and checks the amount with the Cashier when the pay-day comes—that is also part of his duty.
- 60. Then he is fully employed? As I said before, there are times when a man may be more at leisure than another. It is like a teller in a Bank, who sometimes is very busy, and is very much pressed, and then for a short time has nothing to do. In the year 1841 the Lords of the Treasury, through the Board of Customs, fixed the number of clerks as follows:—a Collector, a Landing Surveyor, seven Clerks, four Landing Waiters, one Warehouse-keeper, four Lockers, and four Tide Waiters.
- 61. On whose recommendation was that made? By the then Collector of Customs of Hobart Town, Mr. Barnes, who was sent here to report on the state of the Department: he was acting as a Surveyor General.
- 62. How many more clerks are there now than there were in 1841? Only one clerk was employed in the Warehouse in 1841, and now there are three. We have had an addition of two clerks to the Long Room in sixteen years.
- 63. Is not the business of Warehouse-keeper very much reduced by doing away with the signing of all certificates? We do not recognize certificates now; formerly the Warehouse-keeper signed them, and kept a registry of them. So far as my supervision goes, and after looking into the matter carefully, I think the Warehouse-keeper could scarcely do with a less number of clerks.
- 64. I have no doubt you are aware of the nature of the accounts that are kept? Yes, I am aware of it.
- 65. I presume the business of the Warehouse-keeper must be much reduced in consequence of this labor of signing the certificates having been taken from the Warehouse Department, and thrown on the Bonded Clerks? The system was altered, and the certificates were done away with, many years ago.
- 66. *By the Chairman*: Do you not think the corresponding part of the business has been reduced since the Customs has been handed over to the Colony? No doubt of it.
- 67. In 1852 and 1853 was there not a large amount of business done? Yes. I have heard that the Collector had applications made to him by the merchants to put on extra clerks.
- 68. The business has decreased since that time? Yes.
- 69. Was there not a great deal of time formerly occupied in corresponding with the Board of Customs? Yes.
- 70. Did you not have to make out your accounts in duplicate and in triplicate? We used to send them one account.

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71. Did you not make out your accounts in triplicate? No; we sent one copy home and kept one ourselves.
72. Has that not reduced the work of the clerks a great deal—was there not a continued correspondence about surcharges? We have a continued correspondence with the Audit Office now.
73. But it is not to that extent? No.
74. *By Mr. Gordon*: Do you not think it possible that the same amount of business could be performed with a fewer number of clerks—that is, the business of some of them who are partially engaged might be transferred to others who are only partially engaged? The person who advised that change should be responsible for it. I would not recommend it, because you never know on what day you may have a rush of ships, and the public would be inconvenienced if the clerks are wanted at a particular time, and they are not there.
75. The shipping to this Port has been very much reduced during the last two or three years? Yes.
76. Still the establishment is kept up to its full extent? Yes, to its full extent.
77. The number of clerks has rather increased, indeed? I know of no increase, lately.
78. Perhaps not, lately. You said only seven clerks were recommended, and now you have eleven? That was in 1841, and the population then was about 125,000, now it is about 277,000. There is a great deal more business done now than there was in the years following 1841; then, on the discovery of Gold, a still greater amount of business was done, and after that a great falling off.
79. Had you any more officers in 1853 than you have now? Only one.
80. *By the Chairman*: What was he? A Tide Surveyor, at Watson's Bay.
81. *By Mr. Holt*: He was done away with when I was Treasurer? Yes.
82. *By Mr. Gordon*: Was not the business at that time something like double what it is at present? It was very much greater; we were all at sixes and sevens then.
83. *By the Chairman*: You managed to get through it? Yes.
84. Did you stop after hours—did you work for a longer time? We did not keep the office open for the public business after the usual time.
85. *By Mr. Holt*: The Tide Surveyor at Watson's Bay was a perfectly useless Officer? It was considered by the Collector, after mature consideration, as unnecessary. Perhaps I had better explain this. Formerly, some ten or twelve years ago, the Government did away with the Water Police at Watson's Bay. They then thought it necessary to have some protection, and appointed this Officer. This was done solely by the Government, and without any reference to the Collector.
86. Then this was the act of the Government and not of the Collector? Yes.
87. *By the Chairman*: In what proportion has the shipping decreased in this port since the year 1853? It has materially decreased.
88. Can you tell us in what proportion it has decreased? No, I could not without referring to the books.
89. If the clerks in the office are the same in number as were sufficient before 1853, now that the business has much decreased do you not think you have too many clerks? No; because they are all employed. The Cashier may be lightly employed to-day, but to-morrow he may have a very heavy day's work. The Clearing Clerk the same. And the Jerquer also. The nature of the duties is such that I do not think it is desirable, nor should I like to be responsible for reducing the number of clerks.
90. You think it necessary to keep up the number of officers, because, one day they may have plenty to do, and another day they may have nothing? Yes.
91. What has the Drawback Clerk to do? He has to attend to the drawback debentures; to make out an abstract for the Treasury; and to check the balances with the Cashier.
92. Is it necessary to keep all these particular accounts? Yes. I should like you to see them.
93. I have seen large volumes at all events? The Drawback Clerk copies all warrants of all goods exported, and he examines the drawback debentures to see that they are properly passed, and he also examines the ship's papers outwards.
94. He is not fully occupied in attending to drawbacks? I know of one claim as much as £2,000 in one month. All the debentures have to be examined, to see that the money is paid and the goods exported.
95. *By Mr. Gordon*: Do you not think the Clearing Clerk and Export Clerk, who have similar duties to perform, could be united in one—would it not be sufficient for one clerk to perform the duties of both? Formerly he did so—I mean in 1842, 1843, and 1844, I did these duties myself.
96. Do you not think you could now do it if you had no other business to do—I mean that the amount of labour would not be too great for you to do? I could not say that I could do it. I might be able to do it by working till six o'clock at night. Some days the work is very laborious, at others it is not so.
97. Do you think the clerks at your establishment work as long as clerks in mercantile offices? Yes, I do. I believe merchants' clerks are allowed to go out in the middle of the day; ours are not.
98. Do you not give them permission to go to refreshment? No; it is an established rule that they shall not go out during business hours; they are obliged to eat their lunch in the house.
99. Do you allow half an hour for lunch? We do not allow them any particular time; it is specially ordered that they are not allowed to go out.
100. Who finally examines all these accounts that are kept by the Customs Department? The Auditor General. There is an accountant kept for that purpose in the Audit Office. When the Customs was not under the control of the Colony an Inspector was appointed to examine our accounts.
101. Does he examine your books in the building of the Customs? No.

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- 102. Does anybody examine your books? He may have reference to them.
- 103. At any particular period does anybody examine your books? No.
- 104. You are responsible, as Chief Clerk, for the correctness of the books—that is your business, I believe? Yes. The accounts are not audited in our Department, but they are audited at the Auditor General's Office.
- 105. There is a clerk kept for that purpose, and he has occasional reference to your books? Yes; but he does not audit the accounts in our office. He may refer to them, for instance, if he wanted to see ships' papers for any information connected with the audit of our accounts. He has access to and has liberty to have access to any book he likes.
- 106. You have charge of the accounts—the whole of the accounts? They are in the hands of each clerk respectively.
- 107. Under your supervision? Yes.
- 108. You are responsible for their accuracy? Yes.
- 109. Do you give any bond? Yes, all the clerks give bonds, but they are very small bonds; mine is only for £100. The Collector gives bonds for £6,000.
- 110. That was given in pursuance of the orders of the Lords of the Treasury? Yes.
- 111. Is there any rule or regulation since the Customs have been handed over, in 1852, made by the Government? No.
- 112. Has any rule been issued by the Collector? No, we always followed the old (Board's General) orders.
- 113. Do you not know that these orders were withdrawn by the Lords of the Treasury when the management of the Customs was given up to the Colony? Yes, but we follow them because they are very good rules.
- 114. Do you know anything of the practices of the Landing and Tide Waiters? No, it is no part of my business. I can only tell you what is done in the in-door department. I do not know what is done at Campbell's Wharf or any other wharf.
- 115. To whom do the Sub-Collectors at the out stations pay their accounts? The Sub-Collectors send their money to the Treasury, and notify to us that they have done so. Their accounts are forwarded by them to the Auditor General's Office.
- 116. *By the Chairman:* They do not send their accounts or money to your Department? No. When the change took place the Auditor General directed us that the Sub-Collectors were to forward the money they collected direct to the Treasury, and notify to us that they had done so, by sending us a certain document to that effect.
- 117. Then you have nothing to do with the collection of the Customs at the out-ports? I do not understand what you mean. We pay their salaries, and all communications come to us for advice. They forward their returns to the Auditor General's Office to be audited.
- 118. These documents are not forwarded through your Department, but are forwarded direct to the Auditor General's Office? Yes.
- 119. You have no control over their accounts? We never had any control. The Auditor General directs them to forward the account of the exports and imports of goods. The money they are to forward to the Treasury, and notify to us that they have done so, and what amount they have sent.
- 120. Does he forward an acquittance to the Sub-Collectors when that is done? There is no formal acquittance sent to them. There is a document sent which contains queries and answers, but it is not what would be called an acquittance.
- 121. *By Mr. Weekes:* You say the officers are allowed until ten minutes after ten to arrive at the Customs? There is a book kept in which every clerk when he comes in signs his name, and the hour he arrives at, and it is part of the orders that he shall also sign his name and the hour when he leaves. To prevent any mistake, the messenger is ordered to draw a red ink line after the names that are signed at ten minutes after ten o'clock, and then to take the book away to the Collector's office. Any clerk coming after that time is fined.
- 122. What is the amount of the fine? Two and sixpence.
- 123. What becomes of the money? We never had but few fines.
- 124. The fines are not of frequent occurrence? No.
- 125. *By the Chairman:* When was this Rule established? Some time in this year.
- 126. Why was it established? I cannot answer that question.
- 127. Was it not for the better attendance of the clerks, and because some complaints had been made of the non-attendance? No; the Collector thought it necessary to introduce this Rule. It is the same as in England. We are all subject to the same Rule, and there is no distinction made. We very often see men sign their names at nine and half-past nine. The attendance book is kept for marking the hours of their arrival and when they depart.
- 128. *By Mr. Weekes:* Were there any duties performed by that officer at Watson's Bay? The duties he was supposed to perform were walking up and down Watson's Bay, and by keeping a watch to put down smuggling.
- 129. During the time he was there was there any report made by him shewing the necessity for this appointment? I recollect none. He was ordered to board ships at a certain point, and he had also to send up a report of them. All ships are boarded on arrival by the Tide Surveyors; he was ordered to do that at a certain time, but I believe the order was rescinded.
- 130. *By Mr. Holt:* He had a boat's crew? Yes.
- 131. Do you know that this appointment is continued in the present estimate? Yes; but it is not to be acted upon,—since the Estimates were prepared this office has been abolished.
- 132. *By Mr. Weekes:* Was there not an expensive house built at Watson's Bay for this officer? Yes, a very expensive house.
- 133. Who occupies it now? It is handed over to the Government, and is in the hands of the Colonial Architect.
- 134. What was the rent paid by the Government? It belonged to the Government. It was an iron house, built by the Government.

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135. What do you think it cost? I speak advisedly, and I should say from £1,500 to £2,000.

136. About how long was Mr. Keon stationed there? I must explain this. Mr. Keon was originally appointed to this station after Mr. Edmund Gibbes. I believe he held the office before this.

137. Was Mr. Edmund Gibbes appointed to that office? Yes, originally.

138. Did he occupy the iron house for some time? No, he did not occupy the iron house; he lived in some little quarters he got put up there.

139. *By the Chairman:* What was Mr. Keon's salary during the time he occupied the house? His salary was £250 a year—£150 a year, and £100 a year temporary increase.

140. *By Mr. Weekes:* Are there any records in the Customs' department to shew that that officer was in existence otherwise than by his quarterly payments of salary? No.

141. There was no work done by him and no returns made? No, he was not appointed to make returns; he was appointed for the protection of the Revenue. I must explain this. Since this appointment has been done away with, the Collector of Customs has issued a commission to the Water Police Inspector to do the duty. It is necessary, in my opinion, to protect the revenue and to prevent smuggling.

142. Is it more necessary to have an officer there than on the North Shore? Yes; a vessel might run into Watson's Bay and then run out again.

143. *By Mr. Holt:* Do you think it necessary to have a coast guard for both sides? I do not think it is. I think it is only necessary to protect the salient points.

144. *By the Chairman:* Did this gentleman ever, while he was there, prevent any smuggling? I do not remember a single case.

145. Would it not be almost as easy to smuggle at Middle Harbour as at Watson's Bay? I can only say that in England, where there is a most expensive coast guard, they cannot entirely prevent smuggling.

146. *By Mr. Weekes:* Would there not be as much necessity to place them at a hundred places as at Watson's Bay? No, I should not think so.

147. What attraction is there for smuggling at Watson's Bay? It is very near to Sydney. A man might take spirits out of bond and export them to the South Sea Islands, and bring them back, land them there, and so get them into Sydney without paying the duty.

148. There are many parts of the coast which are as easy for smuggling as Watson's Bay? The access to Sydney would not be so great. The great object, I believe, of the smuggler, is to land his goods where he can look for a market. It is no use landing his goods where he cannot.

149. *By Mr. Holt:* There is a good road from Sydney to the South Head? Yes; no part of the coast would be so accessible.

150. Is this man supposed to protect the whole of the harbour? He is supposed to be always on the *qui vive*, pulling about the harbour, and keeping his eye on every thing.

151. *By Mr. Weekes:* He furnishes no return of any duty he performs? No.

152. *By Mr. Holt:* Did Colonel Gibbes recommend the appointment? No; the appointment was made by the Government. The correspondence with the Government directs that an officer should be stationed there. This appointment arose through the Government itself, who thought it necessary to protect the revenue by placing an officer there.

153. *By Mr. Weekes:* That necessity has ceased? Not at all. It was in consequence of the removal of the Water Police that this officer was appointed. When the Water Police were re-established, the office was thought unnecessary. We have issued a Commission to Mr. Hilliard to do the same duties as were performed by this officer.

154. Did this officer's duties cease at the re-appointment of the Water Police at Watson's Bay? They were carried on for some time concurrently.

155. *By Mr. Buckley:* Have you any reason to conclude that the appointment of this officer precluded smuggling. Have any circumstances come within your knowledge which would lead you to this conclusion? The officer was supposed to be a preventative officer. The very fact of his being there would prevent smuggling, although no cases may have arisen when he was there.

156. Your opinion is that his presence prevents smuggling? My opinion is, that it does undoubtedly prevent smuggling.

157. You are of opinion that his duties are necessary and useful? I think they are necessary, but they may be combined in the way they are now; for instance, the Inspector of Water Police does the duty now which Mr. Keon performed.

158. An efficient officer performs his duties now regularly? Yes.

159. Do you keep any record of bonded goods at the out-stations, and receive any returns from the Sub-Collectors? No; they go to the Auditor General's Office, by order of the Government.

160. Have you any return of the goods in the Bonded Stores at the out-ports for statistical information? No.

161. Is that information furnished to the Government direct? They keep similar returns to us, which are forwarded to the Auditor General from the two out-ports, viz., Brisbane and Newcastle. The Auditor General makes his queries, if any, and observations on these returns.

162. Do you receive any return of the goods that are seized at the out-ports? Yes, they are carried to our seizure account.

163. How are the proceeds of the seizures disposed of? Half goes to the informing officer, and half to the Crown.

164. Are these returns made out in the same way as when the duties are remitted to the Treasury? No; when a seizure is made in this port or any other, a seizure note is made out for information, and that seizure note is forwarded to the Collector by the seizing officer.



165. You get in copies of the duties received, or imports from the out-stations? The Collectors of the out-ports forward their returns of money received direct to the Treasury, and their accounts to the Auditor General's Office, and a return stating the amounts received on spirits, tobacco, &c.

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Esq.

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166. What check have you as to the correctness of the account, and as to the sum paid into the Treasury? We do not check his accounts; that is done by the Auditor General's Office.

167. What check have you over any deficiency of goods once bonded? That would appear in the Auditor General's Office. Suppose any cask were to leak out, it would be written off the Warehouse Keeper's accounts as having leaked out.

168. Does that apply to the out-stations as well? Yes.

169. Is it through the Collector that these deficiencies are made known, and is it the duty of the Auditor General to see that these things are corrected? We do not know what may leak out. There are some special cases in which the Collector has declined to give a return of duty. The law provides for these cases.

170. Does the Drawback Clerk check the Cashier's return of the duties? The Cashier, after he has copied the entries into his Cash Book, hands them to the Drawback Clerk, who divides them under different heads.

171. In the event of any error arising, is that check sufficient? Yes; that check, and the receipt from the Bank, as to the amount of money paid in.

172. You say the duties of the Drawback Clerk are indispensable and important? Yes.

173. Might they not be performed by some one who is not fully occupied. What is the amount of the labour in passing the entries of free goods? It occupies one clerk. He passes through three entries, which he has to initial; two he forwards to the Landing Waiters, and the other he puts into his drawer.

174. Do you think his duties are sufficiently great as not to be combined with any clerk in the establishment? As I said before, I should not like to do it on my own responsibility. In England, the internal arrangements of the Customs are left to the Collector, who gives a high bond. There the Government do not look to the clerk, but they look to the Collector for everything.

175. During the hours of ten to three, whoever may go to the Customs on business, everything must be set aside to attend to it, even if the clerk should be eating his lunch? Undoubtedly, yes.

176. Have you ever heard of any complaints of inattention? I have heard of no complaints; if I had, the thing should have been stopped directly.

177. You do not remember any complaint having been made of inattention of any clerk to the head of the department? No.

178. How many messengers have you in doors? Two.

179. Do you require two messengers? I may here state that we had two messengers in 1841, and three porters, and eight boatmen, we have also two warrant messengers.

180. Do you think these two messengers are wanted? Yes.

181. How are they employed? They have different duties. The warrant messengers go to the wharfs usually every hour, at half-past ten, half-past eleven, &c. They deliver warrants to the Tide Waiters. We keep these two messengers to deliver warrants for the benefit of the public, so that there shall be no delay.

182. Do you ever see the Tide Waiters—are they in the habit of coming to the office to be engaged? I see them when they pass through the hall.

183. Do you see them frequently at the office? They are not in my department; I see them sitting in the hall when they are wanted; they are generally to be found there.

184. You do not know anything of their character? No, not at all.

185. *By Mr. Weekes:* Can you state the amount of bonded goods entered for re-exportation to the neighbouring Colonies, their quantity and value? I cannot.

186. *By the Chairman:* Have you not found the business decrease since the abolition of the *ad valorem* duties, I mean in the work of the clerks? No; I do not think the *ad valorem* duties made much difference; I did the duties of Cashier when the *ad valorem* duty on wine was 15 per cent., and now they pay two shillings per gallon.

187. *By Mr. Holt:* Were there many goods that paid an *ad valorem* duty? All goods paid a duty of 10 per cent., except flour, which paid 5 per cent., and wine 15 per cent.

188. *By the Chairman:* Can you tell us what difference the abolition of the *ad valorem* duties has made in the Returns of the Customs? I could not, unless you moved for the Returns.

189. *By Mr. Weekes:* Can you state the quantity and value of goods on which a drawback has been paid during the same period, and the amount of such drawback? I cannot

TUESDAY, 6 JANUARY, 1857.

Present :—

MR. BARKER,  
MR. BUCKLEY,  
MR. EGAN,

MR. IRVING,  
MR. NICHOLS,  
MR. WEEKES.

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

Arthur William Rolleston, Esquire, called in and examined :—

A. W.  
Rolleston,  
Esq.  
6 Jan., 1857.

1. *By the Chairman* : You are first Landing Waiter in the Customs Department. Yes.
2. How long have you been so? I have been so since the retirement of Mr. Dean and Mr. Neville, in 1851.
3. Were you in the Customs before? Yes. I served eight years in the West Indies; I joined in 1840.
4. When did you join the Customs Department in this Colony? In 1849.
5. What duties have you to perform as Landing Waiter? The Landing Waiters' duties are very various. We have to gauge all spirits and wines, and to take the strengths of spirits, and write them down in our books, examine all case spirits, returning the strengths, &c., examine wines in case; we have to take the weights of all tobaccos, cigars, snuffs, &c., all teas, and sugars, molasses, coffee, &c.
6. Are the Tide Waiters under your supervision at all? Yes.
7. In what way? They remain on board the ships, and the general discharge is under our direction.
8. What hours are you in attendance for the purpose of discharging ships? They vary according to application. Our regular hours of attendance are, from the first of October to the first of April, from eight o'clock till half-past four, and in the winter months from nine to half-past four. If a special application is made for overtime to discharge a ship, our time is from six to half-past five.
9. *By Mr. Irving* : What hours of attendance do the rules of the Custom House require? From nine to half-past four.
10. *By the Chairman* : If you stop after half-past four, or go before nine, you receive extra pay? Yes.
11. At what rate? At the rate of one shilling an hour per hundred pounds of standing salary.
12. What rate do you receive? My standing pay is £300 a year, and I therefore receive three shillings an hour.
13. Are the Tide Waiters paid extra? The Tide Waiters are paid one shilling an hour when employed overtime.
14. During what hours are the discharges continued? Sometimes they apply for permission to discharge from six to six; sometimes they only ask from six to half-past four. In the winter season there is very seldom any overtime, but in the summer time they like to take advantage of the fine weather.
15. Do all the Tide Waiters receive only one shilling an hour for overtime? Only one shilling.
16. That is, the Tide Waiters not permanently attached to the Customs Department—supplementary Tide Waiters? Extra Tide Waiters.
17. *By Mr. Irving* : Who pays the charge for overtime? The agents of the ship.
18. *By the Chairman* : Do the other Tide Waiters, attached to the Department, receive anything? They are not immediately under us, but I believe they do receive something.
19. According to the amount of their salaries? Yes.
20. That would give them about two shillings an hour? About two shillings, I dare say it is. The salaries are noted in a late return. The next two Landing Waiters, Mr. Bramwell and Mr. Hindmarsh, receive, one, half-a-crown, and the other, two shillings an hour, according to the amount of their salaries.
21. Do you attend on the wharf during these over hours? I have scarcely ever missed it, except when I unfortunately got my leg broken, a short time ago. There was only one ship I did not attend, and I went to the captain every afternoon to inquire of him whether he would discharge the next day or not, so that I might make my arrangements.
22. Do you mean to tell us that you attend from six in the morning till six in the evening? Yes, if the ship is discharging.
23. *By Mr. Irving* : You put somebody on board the ship? Yes, the Tide Waiter is on board.
24. You do not attend personally? Yes; I have never missed a day, except within the last six months, owing to the accident I have mentioned.
25. *By the Chairman* : Have you more than one ship discharging under your care at one time? Yes; sometimes as many as four at the same wharf.
26. All under your personal supervision? Yes.
27. With a Tide Waiter on board each? With a Tide Waiter on board each.
28. Would you get paid, at the same rate, for overtime for all these ships, supposing they were all discharging at once? Yes, if they were all working overtime I would expect it from all. But that is a thing that very seldom occurs.
29. Can you tell us the average cost to vessels discharging overtime? From £3 to £5.
30. For the whole time? For the whole time they are discharging.
31. Have you ever known it to extend to £15 or £20? I have not met with such a case, unless you include the payment of the Tide Waiter after the twenty-one days allowed for discharging have elapsed. After twenty-one discharging days the Tide Waiter becomes chargeable to the ship.

- 32. During those twenty-one days he receives pay for overtime, if he is called upon to stop? Yes.
- 33. And for that the ship pays? Yes.
- 34. And pays you as well? Yes.
- 35. What is the greatest number of ships you have had under your charge that have paid overtime at the same time? Once or twice I might have had two.
- 36. Not more? Not more.
- 37. Do you know of any Landing Waiters having had as many as four ships discharging at once, and paying overtime? I cannot say, because I do not know what may occur on any other wharf than the wharf I am attached to myself.
- 38. Are you in the habit of boarding ships at night upon which Tide Waiters are placed? No.
- 39. Whose duty is it to do that? The Tide Surveyor's.
- 40. You have nothing to do with the vessels after the hours of attendance have ceased? No, unless we think there is something suspicious. It is the Tide Surveyor's duty to attend to the officers on board ships.
- 41. Is it the custom of yourself and your co-Landing Waiters to lock the hatches at night? No.
- 42. What security is there that goods are not smuggled at night? There is an officer on board—the Tide Waiter.
- 43. Does he ever sleep? I suppose he does.
- 44. If he is on duty all these hours the ship is discharging, from six to six, he must sleep at night? It is very seldom that a vessel of that description would think of such a thing as smuggling. The only thing he has to look out for is the general discharge all through the day. Tide Waiters are put on board all vessels from Home or Foreign Ports, and, as soon as work is over for the day, the hatches are put on.
- 45. *By Mr. Irving:* What vessels are Tide Waiters not put upon? They are not put on board vessels from Port Phillip or Tasmania, and such places, unless there is spirits, or something dutiable on board.
- 46. *By the Chairman:* None of this money you receive for over hours goes into the Public Treasury—it is your own perquisite I suppose? That is our own perquisite.
- 47. By what authority is that regulated? Generally by the Customs. If I do not mistake there is an authority for it in the Customs Regulations, but I cannot lay my hand upon it at this moment.
- 48. Are you alluding to the rules and regulations issued by the Customs Authorities at Home? Yes.
- 49. Do you know those rules have been abrogated by the Lords Commissioners of the Treasury, since the Customs Department here was handed over to the Colony? We have always acted on those instructions.
- 50. You have no other Colonial instructions? None.
- 51. You continue to follow these instructions? Yes.
- 52. Were they given to you at your original appointment? Yes.
- 53. To this Colony or to the West Indies? To this Colony. For what is called the gauging department we have separate instructions, emanating from the Customs itself.
- 54. *By Mr. Buckley:* The Customs here or at Home? At Home. The Landing Waiter in London is Landing Waiter only; the Gauger's is another branch. Here we amalgamate the two; we are both Gaugers and Landing Waiters.
- 55. Your duties cease after the first gauge of spirits that come out of a vessel to go into bond—you have nothing to do with the re-gauging? We have nothing to do with the re-gauging. We have to see the casks properly gauged, marked, and numbered, and delivered to the Bonded Store. Then the Locker becomes the responsible party for the delivery.
- 56. *By the Chairman:* Do you keep a book containing an account of all goods landed from the vessels under your charge? Yes.
- 57. What do you do with that book? We forward it to the Jerquer in the Long Room. We do not take account of free goods. The Tide Waiter's book shows the return of free goods.
- 58. How do you ascertain whether they are free goods or not? By examination.
- 59. Do you examine every package? Not every package, when we satisfy ourselves that they are not dutiable.
- 60. How do you satisfy yourselves of that? By opening some of the packages. It is easy to tell a package of brandy, for instance, from a package of soap.
- 61. *By Mr. Buckley:* Are you aware of any instances of packages, apparently consisting of pickles and mustard, containing spirits? I have tried such packages frequently, in consequence of notice I had from Mr. Garling that he had been informed that snuff was sometimes imported in that way; but I never detected it. There have been cases in which wines have been landed and passed as free goods, not so much from a wish to defraud the revenue as because the merchant did not know what his goods were, in consequence of the invoices not having arrived.
- 62. Are they in the habit of passing goods absolutely in such cases, or do they pass sight entries? They passed them absolutely. I have been obliged to detain them, and forward them to the Queen's Warehouse, for not being properly entered.
- 63. Do many sight entries come to your hands? A good number.
- 64. How does that arise? Sometimes from a merchant not knowing what his goods might be. Another reason is that the goods may be wanted for immediate delivery, and instead of going through the expense of bonding it saves all the trouble and expense, and the goods are taken away and the duty paid immediately.
- 65. Can a person pass a sight entry and pay duty upon it at the same time? As soon as it is completed.
- 66. Is it a common practice in Sydney to pay duty on goods as they are being landed and transmitted to the store? When it is upon a sight entry there is a deposit lodged in the

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Rolleston,  
Esq.

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Custom House towards the payment of the duty; or, if there is not a deposit, the Landing Waiter has the power of retaining a certain portion of the goods until he finds the duty is paid.

67. *By the Chairman*: Will you tell us your duty with reference to goods for exportation? We have to see that the quantities of goods for drawback are correct. Spirits going from the bond are re-gauged by the Locker, and the quantity is endorsed on the back of the warrant.

68. Who sees such goods put on board the vessel? The Export Officer.

69. The Landing Waiter has nothing to do with that? The Landing Waiter has nothing to do with it. The Export Officer sees the goods put on board, gets the mate's receipt, and sees them put under hatches.

70. Whom do you call the Export Officer? The established Tide Waiters do that duty. I think you will see there are four of them.

71. *By Mr. Buckley*: When spirits are landed from vessels that arrive, have you any check against the quantity shipped on board? We have, of course, a check when we land them; but if they remain any time in bond, they are re-shipped under a re-gauge by the Locker.

72. I do not think you understand me. Suppose a quantity of spirits is shipped in London, have you any means of ascertaining the difference between the quantity put on board there and the quantity landed here? What is shipped in London they do not take any account of more than what their private invoices may be. The duty depends entirely on our gauging.

73. *By Mr. Barker*: You do not compare your gauging with the London measurement? No; we have to gauge every cask ourselves.

74. *By Mr. Buckley*: Does it not appear in any shape on the entries you receive? Yes, a nominal quantity is returned on the face of the entry.

75. Have you ever known cases where casks have been spiled and quantities of the spirits abstracted? Small quantities—not frequently.

76. Stolen by persons on board the ship? Yes. When a cask is deficient the Surveyor is called in, and he states his opinion of the cause of the leakage, whether it has arisen from undue pressure, or from spiling, or any other cause; and of course it goes either against the ship or against the merchant. We do not consider ourselves surveyors in that point of view. All that we have to do is to return the actual quantities. We generally make a deficient cask the last number of a shipment, and write opposite it—deficient in consequence of a stove, head, or broken stave, or whatever it may be.

77. Suppose it has been spiled and a quantity taken out, whose loss is that? It goes against the ship, I believe.

78. Is it frequently the case? I do not say it is very frequently the case. It has occurred in some ships.

79. Does it frequently happen that the people on board the ship have access with such facility to those parts of the hold where these casks are stowed? I strongly suspect that a great deal of it is done amongst the stevedores when the casks are being put on board.

80. Before they are put on board the vessel? Yes—in the stowing, not exactly before they are put on board—in the docks at home.

81. When you say you think it has been done by the stevedores at home, have you known any instances where discoveries have been made previous to the shipment of the spirits? I cannot say I have.

82. Then do you come to that conclusion, because in consequence of the mode of stowing the casks no person could get at them while on board the vessel? Yes. In some few cases packages, particularly case spirits, have been opened while on board.

83. But not to any great extent? Not to any great extent.

84. Have you ever found any cases on board entirely empty? No, I do not recollect any.

85. Have you heard your brother officers mention such things? I can scarcely call it to mind.

86. It is not a general thing—it does not often happen? It does not often happen.

87. Does it often happen that there is any deficiency at all beyond the breakage of a bottle, or anything of that kind? Sometimes there is a deficiency in case spirits.

88. It depends upon where they are stowed in the vessel? Yes. The captains are always anxious to get rid of case spirits, because it is impossible that they can watch them; and when there is a lot of men discharging a ship, if they can lift the lid of a case and take out a bottle or two, they will do so.

89. Then one or two bottles are frequently missing, particularly where the cases are defective? Yes; they will take it if they can get the opportunity.

90. *By the Chairman*: The shipping visiting the port has fallen off lately in the amount of tonnage? At present I think we are just about as busy as we have been at any time during the last twelve months. During the period immediately succeeding the gold discovery, and at the time of the rush from California, we were perhaps a little more employed.

91. Had you the same number of Landing Waiters then that you have now? The same number.

92. There was no increase at that time? No. Since that the Collector has considered it necessary, in consequence of the increase of wharfage in Darling Harbour, which has become one general wharf almost, to appoint Coast Waiters, because it was impossible for the Landing Waiters to attend to all the wharfs there. Coast Waiters were therefore appointed for Darling Harbour, who are, in fact, assistants to the Landing Waiters. I have one of them working with me, who has the same responsibility as I have. They may be classed as Landing Waiters.

93. Free goods are considerably more numerous now than they were before the passing of the new tariff? Yes; when I first commenced duty here we used to charge duty on Tasmanian and New Zealand goods, flax, and things of that sort. The duties were much more general then.

94. How do you distribute the Landing Waiters—is there one to each wharf; for instance, the Circular Quay or Campbell's Wharf? The Circular Quay, being very extensive, requires two Landing Waiters, and there are also two at Campbell's Wharf.

95. How do you manage at Darling Harbour? There are two officers to Lamb's, Botts', Walker's, and Macnamara's wharfs—four wharfs to two officers; and one officer to Moore's, Towns', and Smith's wharfs.

96. Are there none in the upper part of Darling Harbour? In the upper part of Darling Harbour there are two officers.

97. I thought there were only six Landing Waiters? The three Coast Waiters take the place and duty of Landing Waiters.

98. Do you ever examine the coasters that come into Darling Harbour, and other places? As you have suggested the subject, I may say that it is one of the matters in which I think there might be some alteration made.

99. Is there anything to prevent a coaster meeting a vessel at sea, and taking on board puncheons of rum, and landing them anywhere near the Market Wharf? She carries a cargo-book and transire, tantamount to a clearance—the transire is lodged in the Custom House.

100. Suppose a vessel cleared out for New Zealand, or elsewhere, ran into Port Hacking, for instance, where there is no Customs officer, and landed a quantity of goods, could not a coaster bring away those goods, and land them at the Market Wharf, without the slightest chance of being discovered? Perhaps so.

101. The Customs have no check? There is a certain check in the transire. I believe if there is any smuggling going on, it must be through illicit distillation up the country, the spirits thus made being sent down by the coasters.

102. A vessel, for instance, coming from the Macleay River, where there is a great deal of corn grown, and where spirits might be distilled, might bring them down to Sydney easily, covered up with corn, and land it without being discovered? Just so. In the West Indies they have a different system with regard to coasters, because there are so many small islands, besides the foreign islands—Martinique, Guadeloupe, and those places—close to them. There every coaster was obliged to have a "driving permit," and he was obliged to have his driving book headed with the name of the vessel, port, date of departure, description of goods, and so on; and he was not allowed to discharge an article until the Collector's signature had been obtained, and it was forwarded to the Landing Waiter.

103. You have no such check here? No.

104. *By Mr. Barker:* In the case put by the Chairman, of a vessel clearing for New Zealand with spirits on board, would not her manifest be examined on her arrival at New Zealand? Yes.

105. If half the spirits that appeared in the manifest were then found not to be actually on board, would any report of it be made—would not some notice be taken of the deficiency? Yes; the captain must account for it, being under bond.

106. *By the Chairman:* Were you here when the vessel cleared out for Guam, and landed a full cargo of spirits at —? I was not. I dare say such things may be done. American whaling vessels sometimes apply to take out a much larger quantity of spirits than they can require for consumption, intended for traffic amongst the islands.

107. Do you not know that American whalers could bring tobacco stowed away so that the Customs officers could not find it? Yes, they might do it.

108. Packed in their large tun butts? Yes. There was a lot of tobacco landed, on one occasion, at the Flour Company's Wharf from casks entered in as corn; the head of one of the casks gave way and the tobacco was discovered, and Mr. Jeffries, who was then Tide Surveyor, and Mr. Neville, made a seizure of it. That was before my time; it must have been about 1846.

109. *By Mr. Buckley:* Does it frequently happen that vessels trading between this and New Zealand have arrived there with a much smaller quantity of spirits than was shipped in Sydney? I cannot say I know anything of that.

110. *By the Chairman:* You give security for the due performance of your duties? Yes.

111. Where did you give that security? At home.

112. You have not given any security in this Colony? I have not given any security in this Colony. My two brothers are my sureties.

113. For what amount? £500.

114. Do you know whether any of the other officers in the Customs Department here have given security in this Colony? Those appointed in the Colony have.

115. Can you tell us whether any of those appointed by the Lords of the Treasury have been called upon to give fresh security since the Customs Department here was handed over to this Colony? I do not think they have. I have not.

116. *By Mr. Buckley:* With regard to Eau de Cologne and things of that kind, how do you arrive at the duty payable on them? By measurement. We do not take any proofs. It is done merely by measurement, and charging the duty on perfumed spirits.

117. At so much per gallon? Yes.

118. How do you gauge Old Tom? We have recently got a new order to charge it as cordial. Before we measured and took the strength by Sykes' hydrometer as long as it showed the strength. Sometimes I have had it from thirty to fifty under proof, according to the sweetening.

119. Does over sweetening make the difference? Yes, the sweeter it is, the heavier the spirit, and the hydrometer does not act upon it the same as it would with high proof rum. They can put any amount of sweetening, to bring it down to any proof they like.

120. In the absence of that sugar it would not be so much under proof? I should say it would not.

121. What is the general strength of Old Tom? About thirty. I have known it under fifty. Some merchants have ordered Old Tom to be only a certain strength, to be above fifty under proof, to save the duty; it also enhances the value, being more saleable. They reduce it to that at home by sweetening.

122.

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122. Is that the case with Lowndes's Old Tom? Lowndes's Old Tom is generally very weak.
123. What is its general strength? About forty-six under proof. Booth's Old Tom, I think, is about the strongest; it ranges from thirty-three to thirty-six.
124. *By the Chairman*: How long is it since the increased duty has been taken on Old Tom? Within the last week.
125. Do you know by whose orders it has been done? No, except that Mr. Garling gave me an order that it was to pay as cordial.
126. *By Mr. Buckley*: What rate does it pay now? Ten shillings a gallon.
127. Without reference to strength? Without reference to strength.
128. *By the Chairman*: What did it pay before? The same as other spirits, but regulated by the strength.
129. *By Mr. Barker*: It is not, in fact, so strong as other spirits? No. The end of it will be that it will drive Old Tom out of the market altogether, and all that is here now will have to be exported.
130. *By the Chairman*: That will encourage the introduction of foreign gins? Yes; it might.
131. They might manufacture Old Tom in this Colony. I do not know whether they understand it or not. Holland gin is a very different spirit from Old Tom.
132. *By Mr. Buckley*: Is not English gin imported? Yes, in casks.
133. Old Tom comes in cases? In cases generally, some in casks.
134. *By Mr. Weekes*: Do you class English gin as Old Tom? No, it is passed as British gin.
135. What is it by which you characterize Old Tom—by its sweetness? By its sweetness and by the test of the hydrometer.
136. What is the general strength of case gin? The general strength of case gin is 15 under proof. That is the Dutch proof, and it varies from 14.6 perhaps to 16 under proof; but 15 is about the average proof of gin, that is, Holland gin of the JDKZ or anchor brand.
137. It is generally very troublesome, is it not, to make up the packages? Yes, it is troublesome.
138. By whom is that labor performed? By the store it is bonded in.
139. No labor is charged to the Government? No, except the superintendence of the Landing Waiter; he has to see it weighed, to take the proofs. The store provides all the labor.
140. *By Mr. Barker*: You ascertain the quantity by weighing? We ascertain the quantity by weighing to a certain extent. If we were to open every case, it would be both an injury to the package and to the merchant. We find one package that is perfect, and put it in the scale, and weigh the others by it; the scales are so nicely balanced, that they will show when a case contains a broken bottle immediately. When we find a broken case, we set it aside, and fill up any others that may be deficient from it. I have seen as many as thirty-five cases out of four hundred empty.
141. You mean with the bottles broken? Regularly gone—I mean broken. But that is very seldom the case now. They send out a better description of case than they did formerly. The insecurity of those formerly sent out was much complained of by the merchants, particularly, I think, by Mr. Lamb, who wrote home about it, and now they send out better cases. The cross sticks were so slight that they did not protect the bottles.
142. How are they secured now? By regular sawn sticks, firmly fixed.
143. Are they tenoned into the sides of the case? Yes.
144. In consequence of that alteration, you have found the deficiency less than before? Far less.
145. The deficiency in those days was about four or five per cent? Sometimes even more than that.
146. How much more generally? Well, I have seen as much as ten per cent. in one shipment.
146. The alteration has reduced it to one per cent? Taking the average, it is about two per cent.
147. *By the Chairman*: You say you have never had any printed instructions issued to you by the Collector? No; I brought them from home with me.
148. Do you know of any of the other officers having received such instructions? No.
149. Do you obey this order, as to entering the time of your commencing and leaving off work in a book? Yes.
150. If you stop over time, how do you get to the book? There is a back door to the Custom House.
151. *By Mr. Buckley*: Does that apply to six o'clock in the morning as well as nine? Yes, it applies to six as well as nine; we have access to it at that hour.
152. *By Mr. Weekes*: What do you say are the duties of the Tide Surveyors? That is a different branch to ours. They have to attend vessels coming inwards or going outwards, place officers on board, take account of the cargo, and things of that kind. It is quite a distinct duty from the Landing Waiters.
153. It does not come under your cognizance? No.
154. *By the Chairman*: Do you ever use the boats belonging to the Customs Department? No; they are used by the Tide Surveyors.
155. How many boats have they? Two.
156. How many men? If I do not mistake, there are six men in one boat and four in the other.
157. Are those boats constantly in use? Yes, constantly, in going off to visit ships, and to jergue ships, to see that their stores are correct.
158. Are there as many as six men in one boat? I think it is five and a Coxswain, but I am not certain, having nothing to do with the boats. I cannot enumerate the crews exactly.
- 159.

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- 159. *By Mr. Weekes*: Can you state the highest amount you ever received in any one year for your overtime? I could hardly say. Within the last six months, if I were to take it by that, I have not received £5. But at other times, when there are a great number of vessels in, it might amount to £12 or £14 for the quarter.
- 160. How late at night do you work overtime? According to the application. Some apply to discharge until five, some till six.
- 161. It is regulated by the application? Yes.
- 162. Permission would be granted to discharge till dusk then if it were granted? Merchants will not receive their goods when they discharge so late as that.
- 163. Still, if applied for, it would be granted? Yes.
- 164. During all that time do they put dutiable goods on the wharf? No.
- 165. At what time of the day do they land dutiable goods? Till twelve o'clock, so as to afford time to see them safely bonded before the stores close. If dutiable goods were discharged till four o'clock, it would keep the Bonded Stores open too long.
- 166. Is it ever the case that dutiable goods remain on the wharf all night? I have known that to be the case, in consequence of the merchant himself having passed a duty entry, and paid duty upon them.
- 167. *By the Chairman*: Have you known it to be done without that entry? No.
- 168. *By Mr. Weekes*: Are you prepared to say it has never been the case? I cannot say that it has never been the case, because I do not know what other officers may have done; but I myself have never allowed a single cask to be landed that I did not see delivered to the Bonded Store. If such a circumstance should occur, a watchman is put on.
- 169. *By the Chairman*: When dutiable goods are landed and carted away to a Bonded Store, does any Custom House Officer go with them to see them safely delivered? No.
- 170. What is the security to the Revenue that part of the goods may not be abstracted on the way? We have a form of load note, containing the particulars, which is forwarded with the goods to the store, and when the Locker receives it he sees that the packages correspond.
- 171. How does he know that the gauge is correct, in the case of spirits—does he re-gauge them on delivery at the store? No. It is not likely that a person going through the open street in the day-time would think of starting a bung on a dray.
- 172. *By Mr. Weekes*: Supposing a number of casks of brandy are taken away in the way you describe, merely handed over to the drayman for conveyance to some Bonded Store in another part of the town, how are the Customs' Officers to know that the dray has not been drawn into some yard on the way, and half the contents abstracted from the casks, and then taken on to the Bonded Store; what check have the Customs? It would show at the Bonded Store on the re-gauge for delivery.
- 173. Do they re-gauge on arrival at the store? No.
- 174. Then in what way are the Customs able to detect the abstraction of any amount of liquor *in transitu*? Such a case has never occurred.
- 175. *By the Chairman*: You mean it has never been found out? I do not think it has ever occurred.
- 176. When do the Lockers re-gauge the liquor taken to the Bonded Stores? If a merchant wants any quantity of spirits for consumption, he passes what is called a requisition, which is taken to the Locker, and the Locker then re-gauges it for duty.
- 178. That may not happen till the cask has been in Bond two years? It may not.
- 179. Then it might be found out, two years after the date of its entering the Bonded Store, that half the supposed brandy was only water? The proof would tell that.
- 180. Supposing such a cask to be left in a Bonded Store two years, it is then sold as overtime goods, is it not? After three years.
- 181. During the whole of that time it may not be re-gauged? It may not.
- 182. *By Mr. Weekes*: Is any body made responsible for any deficiencies that may be discovered in re-gauging in a Bonded Store? I cannot say there is. If a cask is found deficient after, perhaps, remaining in the store a long time, the Landing Surveyor inspects it, and satisfies himself as to the cause, and certifies that the loss is occasioned by defect in the cask, or otherwise.
- 183. And that is an end of the matter? That is an end of the matter.
- 184. *By the Chairman*: Do you know whether stock is actually taken when goods are sold at overtime sales? I should say so.
- 185. Do you not know they are sold by the warehouse book only? By the warehouse book and the Locker's book.
- 186. Is stock taken according to merchants' practice? Stock is taken very frequently at the different stores.
- 187. *By Mr. Weekes*: A hogshead of brandy may, at the end of a few years, be represented by a bundle of staves only? There have been some cases in which the whole contents have leaked out; the head of a cask absolutely went out of it at Pollard's Bond, and one with a broken stave at Towns' Bond.
- 188. Was that discovered soon after it took place? Almost immediately. The Locker discovered it in going through the store.
- 189. I understand you that although the Customs' Officers satisfy themselves that casks of spirits are full, or contain a certain quantity, when they leave the wharf, they have no check that the quantity and strength they have gauged is actually delivered into the Bonded Store? They have no check except the note to the Locker.
- 190. Unless the Locker at the Bonded Store were to re-gauge the casks and test the strength again, there is no check at all? No; but I have never known an instance of its being necessary.
- 191. *By Mr. Buckley*: The note to the Locker is merely a guarantee that the package is delivered? The note shows the quantity delivered from the wharf.

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192. You say stock is taken—how is it taken? An officer goes through the store and takes down a list of the goods.
193. Is that stock entered in the Custom House books? Yes.
194. Is that checked with the accounts kept in the Custom House? Decidedly.
195. Have you any means of knowing whether there has been much difference? No; I have not. If there was anything of the kind I might, perhaps, hear of it; but I never heard it.
196. Have you ever been present when overtime goods have been sold? No.
197. Have you any means of knowing whether samples are produced? No, I cannot say whether they are or not.
198. *By Mr. Weekes*: Then an ordinary drayman is the only guardian on behalf of the Customs while dutiable goods are being transmitted from the wharf to the Bonded Store? The Bonded Store is generally so much adjoining the wharf where the ships are discharging that goods are almost in sight the whole way.
199. Are there not Bonded Stores spread all over the town? There are.
200. *By the Chairman*: How many Bonded Stores are there? I cannot call to mind.
201. Are there not twenty-two? Yes; I think that is the number.
202. Is the same course pursued with reference to cigars? Yes.
203. Could not a man take out half-a-dozen bundles from a case while it was on the way to the Store? He could not; the cases are too well made up.
204. If he broke the outer case, could he not take out half-a-dozen boxes, supposing the man was rogue enough to do it? Of course these things might occur, but I have never known them.
205. *By Mr. Barker*: You spoke of keeping accounts in the Custom House of all cargoes, are these accounts regularly balanced and the deficiencies shown? That goes entirely through the Long Room. It must be done to get the statistical returns of imports and exports.
206. No, you misunderstand me; I want to know what is the per-centage of deficiency on cargoes generally—are there books to show the deficiency? Yes, our gauging book shows the deficiency. We furnish to the Long Room, in fact, the whole data on which the duties are paid. If it is case spirits or tobacco, there is the Red Book to show it, and if it is spirits or wines in bulk, there is the Gauging Book. This is the form used, and every cask is put down separately. (*The Witness handed in a form.*)
207. *By the Chairman*: Have you charge of all the other Landing Waiters? No; the Landing Surveyor is our superior officer.
208. I was going to ask you whether you know that a great many of them are in the habit of getting drunk? You will always hear remarks of that sort made.
209. Have you not very frequently seen it? Not very frequently; there may perhaps, have been isolated cases—and I do not know whether they were drunk either, for if a person is standing out in the hot sun with no shed or anything to protect him, and has perhaps eighty or ninety casks to gauge, he is very likely to be affected, although it may not be through drink. I have had as many as from one hundred and twenty to one hundred and fifty casks spirits, besides wines, to gauge in a day.
210. *By Mr. Weekes*: Is it not the fact that sometimes the fumes of the liquor will create partial intoxication? If a person were standing over it for any time they would.
211. *By Mr. Barker*: If standing in a confined cellar perhaps, not in the open air? Even in the open air.
212. *By Mr. Buckley*: Is it usual to taste spirits when they are gauged to know whether the cask contains brandy or rum? We see that by the strength and smell of it.
213. It is not necessary to exercise that particular sense for the purpose of determining the kind of spirits? Not at all.
214. *By Mr. Weekes*: I suppose they generally keep a little water handy in the Bonded Stores in case anybody wants to sample the spirits? The Storekeeper generally has water, certainly.
215. Is it not the fact that there is a great deal of tasting going in Bonded Stores—I do not mean by the Customs' Authorities, but by callers in? I do not think it. I have known myself, on Campbell's Wharf, that absolutely for a whole fortnight there was not a bung started in that store. The Storekeeper is very careful about anything of the kind.
216. Campbell's Wharf has a particularly good character, and the Bonded Store also? Yes.
217. *By Mr. Buckley*: If these people were in the habit of being a state of intoxication, would you have opportunities of seeing them—the Tide Waiters I mean? Of course I would, during the discharge of the ships.
218. There are a good many Tide Waiters kept, are there not—extra ones? Yes, there are a good number of extra ones; but they are not on pay except when they are on duty.
219. What pay do they get? Twelve shillings a day for every day they are employed.
220. Are they paid at the same rate for every part of a day? They are paid as long as they are on the ship.
221. Are any half days allowed? No.
222. If they commence in the morning they are paid for the whole day? Yes.
223. *By Mr. Egan*: When you say Campbell's Bonded Store has a good character, you do not mean to imply that any other has a bad character? No, I do not say that; I should be very sorry to do so.
224. You mean to say you know more of that store, as it is under your supervision? Yes; it has been for the last six months under my more frequent observation.
225. *By the Chairman*: Does it not often happen that goods for Towns' Bonded Store are landed on the Circular Quay and carted round? No, they are lightered round.
226. *By Mr. Buckley*: Who goes with the lighter? Only the lighterman, who receives the same form of load note.
227. No officer of the Customs? No.



WEDNESDAY, 7 JANUARY, 1857.

Present:—

MR. BUCKLEY,		MR. HOLT,
MR. R. CAMPBELL,		MR. IRVING,
	MR. WEEKES.	

CLARK IRVING, ESQUIRE, IN THE CHAIR.

Henry Fisher, Esquire, J.P., called in and examined:—

H. Fisher,  
Esq.

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1. *By the Chairman:* I believe you are a merchant in Sydney? I am.
2. And have been so for many years? Yes, twenty-five years; and I have been a Custom House Agent since 1831.
3. For how long? For twenty-five years.
4. You are an agent now? Yes; I hold a license still.
5. Then, I presume, you have had great experience in the working of the Customs Department? Yes; for ten years I was actively engaged as a Custom House Agent daily. I may add that I have also had a Bonded Warehouse for sixteen years.
6. Could you suggest any improvement in the collection of the Customs, and the conduct of the business of that department. What is your impression as regards Bonded Warehouses—do you think there could be any improvement in the system of bonding? The mode of exporting goods at present is very unsatisfactory. It would be a saving to the revenue, and, at the same time, it would be more easy for the trade, to do away with the Export Officer, and remove goods under a permit, in the same way as they do in England, from port to port, and from to town. In fact, that is one of the principal alterations I should recommend. At present, if I have ten hogsheads of rum to export, I have to pass an entry at the Custom House, to give notice of the export, to sign a bond for double the amount of duty, myself and one sufficient surety. The present system, then, is to send an Export Officer to the Warehouse whose duty ought to be to see the goods shipped.
7. Is that carried out? In many cases it is not.
8. Then they trust to the drayman or to chance for the shipment? It is too fatiguing in a climate like this for a man to walk some ten times in a day from a Warehouse to a distant wharf—they could not do it—and it would be derogatory to a respectable Officer of Customs to ride on the dray.
9. You now speak from experience, that they have not been in the habit of doing so, and will not do so? I will explain what takes place. When you ship ten hogsheads of rum, you enter into a bond, together with a surety, at the Custom House, for double the amount of duty. The Customs then send an Export Officer to the Warehouse. It is the duty of this Officer to see the goods shipped. He, after delivering the goods on board, takes his warrant to the Landing Waiter, who certifies that they are shipped, on the word of the Export Officer and signature of the mate of the vessel. He endorses the warrant although he knows nothing about the matter.
10. What officer gives the warrant to the Landing Waiter? The Tide Waiter.
11. Is it the Tide Waiter's duty to go and see that the spirits are actually shipped? The Tide Waiter is supposed to accompany the goods to the ship. It is the Tide Waiter's duty to take the warrant and get a receipt on the back of the warrant from the Chief Officer of the ship; and he then carries the mate's receipt to the Landing Waiter.
12. Then your opinion is that, under the present system, the greatest roguery may be going on, and robbery of the revenue? My opinion is that you run a great risk, as *no superior officer* of the Customs has any control over the shipment of goods, and that the shippers of goods run a greater risk than they would do if a permit from port to port were sent, which permit should be in force only for so many hours.
13. Will you have the goodness to explain the system of permits in operation in England? In lieu of leaving it to an Export Officer to ship the goods, and to the Landing Waiter to trust to the genuineness of the mate's receipt, I would recommend that a permit should be issued direct to the Landing Waiter at the Sufferance Wharf, on notice being given that a certain number of casks of spirits were about to be shipped; that would be his notice to look out for them, and to see them shipped, and it should be in force a certain number of hours—I would give the parties forty-eight hours after passing their entries—that would be quite long enough, and then any officer of Customs meeting goods without a permit, or the permit not being in force, could seize the goods. That would do away with this unnecessary man—this extra Tide Waiter.
14. As regards the export, have you any other suggestions to make? Yes; there is one matter which causes very great inconvenience to the inter-colonial trade. If we take a variety of goods, free goods, on board a vessel—I, myself, being the owner of a vessel in the colonial trade, have felt the inconvenience—we have to wait sometimes, and lose a day in clearing a vessel, because each shipper has to pass an entry for every package of free goods. Say, for instance, there are twenty cases of cheese, or twenty bales of wool, although they are colonial goods and free, they must be passed in the name of the shipper. I would suggest, instead of that, that all free goods should be passed by one entry of the Agent of the ship, he describing the nature of the goods and the number of packages. This suggestion, if carried out, would do away with the necessity of having one of the clerks in the Long Room, who is engaged in copying these entries every day into a book, which is quite unnecessary. We should lodge in the Custom House our manifest, and, attached to this manifest, one entry containing the whole of the goods on board the ship, excepting the bonded goods, and there should be a specific entry for bonded goods.
15. You would be bound to enter the particulars previously to the ship's sailing? Yes; the master of the ship being compelled to lodge a complete and full entry from his cargo book.

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At present he may go to the Custom House at twelve o'clock in the day, to clear his vessel, and may find that five or six people have not passed their entries, and in consequence the ship will be detained till the following day. I would particularly impress upon the Committee my plan for shipping spirits, tobacco, cigars, &c.; if this were adopted, the warrant would be forwarded to the Landing Waiter's office *direct*, and the Landing Waiter would then be responsible for the due shipping of the goods, instead of an irresponsible officer, as at present.

16. As regards the imports, what would you suggest to simplify the business, to save expense, and to do away with a portion of the present establishment? It would be very desirable, now that there is no wharfage connected with the Customs, if it could be carried out with free goods, I think the Agent of a London ship might be permitted to pass one entry inwards for all free goods—one long entry for a ship's cargo, if it were composed of British goods.—I think the Master of a ship, or the Agent, might be permitted to clear all goods, say at all events those that had not been entered within forty-eight hours of the arrival of a vessel.

17. Then as regards bonded goods? Bonded goods should be described particularly, and, to prevent fraud, it would be absolutely necessary that the owner, or consignee of the goods, should pass an entry, as you could hardly describe the contents of many packages.

18. What is the present system as regards the bonding of dutiable articles—spirits for instance—in landing them, supposing they had to go to Towns', or Lamb's wharfs? At present the importers and Bonded Storekeepers sign a bond to double the amount of the duty payable upon the package, that it shall be accounted for to the satisfaction of the Customs. That is the first step we take before landing goods for bonding.

19. That authorises their being landed immediately afterwards? Yes, during Customs hours.

20. That does away with the necessity of an officer accompanying the goods? Strictly no spirits ought to be allowed to leave a ship without an officer going with the goods, but in fact that order is not complied with—they send dray notes with them.

21. Who gives that memorandum? The Landing Waiter.

22. To whom is it addressed? To the Locker at the Bonded Warehouse the goods are entered for.

23. Supposing the goods are sent by a lighter? The Tide Waiter then forwards a boat note to the wharf.

24. Does not that give a great opportunity for fraud, if there be any connivance between the dray keeper, or the store keeper, or any person connected with the spirits? No; at every step the Government is protected by the bond entered into.

25. Supposing a full cask is put on board the lighter, or in the dray, and an empty one is delivered, how is the Locker to know that that is not the cask that came from the ship? The casks are gauged previous to removal, except when the business is much hurried, and then sometimes they are obliged to leave forty or fifty casks to be gauged next day.

26. Supposing the parties wish to save wharfage, are not the casks delivered on board ship direct from the lighter? Yes.

27. In such cases are they gauged? No, they go to the Sufferance Wharf entered for.

28. *By Mr. Campbell:* In charge of a Custom House Officer? No, they do not send off people in the lighter; the officer on board the ship sends a boat note to the Locker in charge of the store, to the best of my belief.

29. *By the Chairman:* That is the present system? Yes.

30. What would you suggest in lieu of that? I think if you carry my views out they cannot be improved; I would adopt the same system in exports as in imports, viz., by the permit direct from the Landing Waiter.

31. Speaking of exports, what check would there be, if there were this mere memorandum that the goods were not taken elsewhere than on board ship? Only this, that the Master of every British Registered Ship signs a bond on taking command, which is sufficiently stringent.

32. I will suppose a case, to illustrate what I mean. There are six drays containing twenty hogsheads of brandy, which are to be shipped, but instead of these, six other drays containing twenty hogsheads of low wines go alongside the vessel, and are shipped, the brandy being sent elsewhere. The master of the vessel would know nothing of the contents of these casks, but would require only that they should have certain marks upon them. It is the duty of the Landing Waiter shipping them to see to this.

33. I am speaking of exports? The time would not allow—it would be impossible to carry out a fraud of that kind, besides, the master of the ship would be liable to have his vessel seized at any other British port to which he might go if he could not produce the brandy; it is borne on the cockpit. On his clearance is stated the number of gallons each hogshead contains—so many hogsheads of brandy, so many hogsheads of wine, containing so many gallons, so many tierces of tobacco, weighing so much—and the ship is liable to seizure if the master cannot explain to the satisfaction of the Customs what he has done with them.

34. You think if these suggestions were carried out, not only with the imports but with the exports, it would be a great improvement upon the present system? The system of export is radically bad, because the Landing Waiter is bound to certify to the receipt of goods he knows nothing about.

35. Neither he nor any other officer? Yes; the Tide Waiter does.

36. Have you any other suggestion to make to the Committee? Now that you have passed the duty upon Bonded Stores, I may call the attention of the Committee to the number of hours during which these are allowed to remain open. Some of these are kept open an hour, some a couple of hours, some four hours, and some the whole day, according to the view the Collector of Customs took of the requirements of each store; but, in justice to parties holding goods in bond, all the Warehouses should be open from nine to four. I would suggest that all Bonded Stores should be kept open from nine o'clock till four.

37. That rests with the Collector of Customs? Yes; at the present time a Bonded Store-keeper often finds it difficult to get an officer at all—I may instance my own store. It was approved of, and licensed by Government in May, 1855. The time appointed for its being open was from nine to three. Directly after, another Bonded Store was opened, and my officer was taken to attend that store from twelve o'clock. The officer's duty was thus divided, and my store could be opened only between nine and twelve.

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38. Who gave you authority in the first instance, when you were first licensed to open from nine to three? The Collector of Customs.

39. And immediately after he withdrew that authority? A few months afterwards it was found necessary to send my officer to Brown's store for the remainder of the day. This arrangement is injurious, both to Mr. Brown and myself, because we may want to deliver our goods at any time, and certainly ought to have that privilege.

40. If the Collector of Customs chose to give an order that Bonded Stores should be open one hour a day, he has the power? He has the power. I suggest that now the Bonded Stores have been called upon to contribute to pay for the officer, that every Bonded Store should be open the same number of hours that the Long Room is open.

41. *By Mr. Holt:* You are aware that some of the Bonded Stores are very small, and could not afford to keep an officer all through the day—such as Dixson's? The Act of Council will annihilate these; you will not find them willing to pay £200 or £300 for nothing.

42. *By the Chairman:* Do you think there is a necessity for these Bonded Warehouses up and down the town—is it not rather detrimental to business, than otherwise, to have Bonded Stores in out of the way places? I think in granting licenses for Bonded Stores, it should be considered whether they were necessary for the requirements of the port, and that they should not be granted merely for the convenience of a merchant who wants to store a cargo of wine.

43. For instance, do you think a chapel should be licensed as a Bonded Store? I think there are two or three private Bonded Stores which are an expense to the Revenue, and if the Bonded Store Duty Bill is passed, it will do away with these.

44. What is your opinion as to the desirableness of Government undertaking the whole business of Bonding—if they were to take it entirely into their own hands, and to have one large store? Had it been done when *they had good water frontage, and plenty of room to build a store, it might have been desirable*, say on the Circular Quay. The present Commissariat building would make a very good Warehouse, with a little alteration. If this had then been done, no doubt it would have given great satisfaction to the public, who do not like the system of private Bonding.

45. Do you know anything of the Customs Regulations at the out-ports on the coast—whether they are satisfactory to the community? Newcastle is a Free Warehousing Port, and so is Moreton Bay; but I have had no opportunity of observing how the Customs work on the coast.

46. Could you suggest any improvements as regards the Customs at the out-ports? No; generally speaking, I think, there is really less to complain of in the Customs Department than in any other Government establishment; that I state from my experience of twenty-five years. The Revenue is collected, and the business is done more satisfactorily in that Department, than in any other under Government. There are, no doubt, a few inefficient officers, and the Landing Waiters have, especially, a great inducement to irregularity, if in any way inclined to it, from being compelled, in this hot climate, to gauge spirits on a wharf, unprotected from the sun. On all Sufferance Wharfs there ought to be sufficiently roomy sheds beneath which the spirits should be gauged. I have seen men in a dreadful state when they have been gauging brandy on the Circular Quay and on Campbell's Wharf—what with the fumes of the spirits, and the burning sun, it has been enough to kill them. The Messrs. Campbell did erect a shed for this purpose, but of late it has not been so employed, as it has been completely blocked up with other goods.

47. *By Mr. Holt:* The exposure to the sun when engaged in gauging spirits must have an effect upon the men? Yes, and upon the spirits as well.

48. Under such circumstances, can spirits be gauged accurately? I am not aware in what proportion spirits will swell, but I know that a hogshead of brandy will rise nearly an inch in the sun, and, of course, it is also impossible to ascertain the exact strength. Numerous complaints are made after the casks have been gauged.

49. Do you not think it would be well to gauge all spirits in a proof room, to take, say half a pint from a cask into a bottle, which should be hermetically sealed, and afterwards be tested by a competent person? I believe that is done in England, but it could not be carried out with every package, time would not permit. I would suggest, as a check upon the accuracy of taking the strength of spirits, that as there is now upon the Estimate a Surveyor of Warehouses; it should be part of his duty to have samples drawn occasionally, to enable him to test the accuracy of the Landing Waiter's return. But it would interfere too much with the business of the port to have spirits gauged in the way you suggest.

50. *By the Chairman:* Would you have the spirits pass through his hands before delivery, so that he might check the returns as to their strength? It would be well to give the public power to apply to him. For instance, if I had forty hogsheads of brandy landing, if he checked one out of five, that would be sufficient to enable him to tell whether the officer had done his duty.

51. You have been speaking of the Lockers, and their duties—have you, generally speaking, found them efficient? Yes. I have always had a very efficient Locker. I cannot speak of other stores; in fact it would be invidious to do so. In my store, the Locker keeps up his book to within five minutes of his delivery. You can go to my store and ascertain the stock in hand at any time.

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52. Spirits sometimes remain two or three years in hand? Yes; that is a hardship. At present the Collector can, by the Warehouse Act, compel you to clear goods in three years, or at the expiration of that time to sell them.

53. Do the Customs take any notice of spirits during that time, while they are in the store—is it any one's duty to see that they are carefully stored? It is the Landing Surveyor's duty to visit the stores.

54. Are they in the habit of doing it? Yes; Mr. Garling visits my store occasionally, and it is the duty of the Bonded Storekeeper to report any leakage. If a cask bursts, or any accident happens, and we have to get Mr. Garling's certificate of the accident, and how it occurred, that is the only way by which we can relieve ourselves from the payment of the duty.

55. Do you think that a satisfactory mode, when there is a great leakage of spirits; do you not think some check might be kept upon that if an officer were, from time to time, say once a month, to visit the stores and examine the stocks? I think that may very well be left to the merchant and Bonded Storekeeper; for a merchant, if he looks to his own interest, will not bond his spirits in a store where there is a suspicious amount of leakage.

56. No doubt it may be left where the Warehouse-keeper is an honest man, but does not the present arrangement afford great facilities for the appropriation of property? Not if the Warehouse Act is carried out to the letter, because if there is undue leakage the Collector of Customs can call upon the party to pay the duty, unless he can account for it.

57. Has there ever been an instance of the Collector having called upon any one to pay duty for leakage? I do not know; he has generally believed the statement of the party; in fact, it has generally been proved to his satisfaction.

58. *By Mr. Campbell:* Have not storekeepers had to pay for leakage? I have not. At one time I had the largest store in Sydney—Unwin's—and I was compelled to take in more goods than I had room for. I had immense leakage, but I was not called upon to pay one farthing, though I had to furnish an account of the cause, and I had also the statement of the cooper. Maedermott and Dixon lost heavily by leakage in twenty hogsheads of rum, in the years 1842 and 1844. At this period immense importations took place, and the stores were inconveniently crammed. The Collector did all he could to protect the Revenue and Importer, and every one knew that Mr. Maedermott was very careful of his rights, but neither he nor the Customs complained of carelessness on my part. Undue leakage often arises from careless stowage on board ship. Hogsheads of brandy, for instance, come from Liverpool with salt stowed over them, and wherever a bag of salt touches an iron hoop it causes the hoop to corrode, and to break within twelve months. I have lost many casks in that way. You can hardly discover when the casks are landed where the salt has touched, because the hoops are generally rusted. But it does not affect the revenue; it would be all the same to the revenue if all the brandy in the Colony leaked out at night, as it would not go into consumption, if a supply came the next day.

59. *By Mr. Weekes:* Not if it leaked away, but if it were taken away the revenue would suffer? Yes. You will see that there is a three-fold protection; in the first place you make the merchant and the storekeeper enter into a bond for the payment of double the amount of duty; then the storekeeper is liable to have his license cancelled, if his store is not conducted to the satisfaction of the Collector; then again you have Lockers, who are under a bond to the Customs for the proper fulfilment of their duties, and they hold the keys of the store.

60. Have you ever known the license of any Bonded Store cancelled? No, not for any irregularity.

61. Or Locker discharged for any neglect of duty? Yes; many years ago several Lockers were discharged for having irregularly let some tobacco out of bond. That is the only instance, in twenty-five years experience, that I have known of any irregularity.

62. Is stock ever taken of goods deposited in a Bonded Store? About eighteen months or two years ago they took stock. We do not know when they are about to take it, as they give us no notice. I have only known stock to be taken twice since I have been in the Colony, once in 1855, and in 1839 or 1840, when Mr. Barnes was here.

63. *By the Chairman:* That was done at Mr. Barnes' instance? I cannot tell.

64. *By Mr. Weekes:* Then, for a period of sixteen years no stock was taken? I am not aware of stock having been taken by the Customs, except at the times stated by me already.

65. You would have known had yours been taken? I should.

66. Do you know the result of this stock taking, as to the deficiency discovered? As to my own only. I know that my own stock was correct; that it tallied with the books.

67. When you say that it tallied with the books, do you mean that there were the same number of casks or cases? With the exception of leakages, and breakage of cases, such as cases of gin, which had been examined from time to time, rectified in the Landing Surveyor's certificate, and entered in the book. The Warehouse-keeper keeps his ledger, and the Locker keeps his book in the store also, in which all these matters are entered.

68. Where there are a great quantity of spirits in stores, several tiers, and two or three deep, is it not possible that a leak may run so long that a cask may be entirely emptied before it is discovered? Yes; there, I think, the merchant would be protected by a Surveyor of Warehouses. If such an officer is necessary, his duty should be to visit and inspect the stores—which has always been done when occasion required it. It is now my duty to report to the Landing Surveyor any case of leakage; if I did not I should hold myself responsible to the Collector for duty.

69. What character for sobriety do the Lockers and Officers of the Customs generally bear? With one or two exceptions, very good.

70. The excitement to which you have alluded—do you think that has arisen from exposure to the sun only? I have witnessed with pain the effect it has had upon the constitutions of very regular men, who have been for a number of years exposed on the wharf. It is not right

right that any man should be required to gauge spirits in the burning sun; in gauging, he is, of course, obliged to hold his head over the spirits and inhale the fume, and has also sometimes to taste them. A Landing Waiter, not unfrequently, will have fifty or sixty casks to gauge.

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71. There is no tasting necessary to the trial of the spirits? If I landed brandy under the denomination of rum, I might cheat the revenue of three shillings a gallon; so that the officers have sufficient cause for the examination, indeed I think the Landing Waiter is bound to taste. I should, if I were in such a position, feel bound to taste a little of every parcel, if my nose were out of order, and I could not smell so as to distinguish between brandy and rum; and even this will operate on the system of a weak constitution. But I have no doubt that the excitement to which I have referred is caused chiefly by exposure to the sun. There ought to be a large shed on every wharf, beneath which spirits should be gauged. The shed on the Circular Quay was originally intended for that purpose, I believe.

72. Are Bonded Stores at all used as convenient places for persons to drop in at about lunch time? That has, from time to time, come under my notice, and I have had to object to it. But if a publican is taking goods out of bond, he can demand that the casks be re-gauged, and then, when the spirits are tasted, whatever is left in the tube is his property, and we cannot prevent him giving it to any one he pleases. Besides there is always enough to drink when the sampling is going on, and, if they are inclined to do so, they can take it, as they must take samples in order to test the strength. In fact, we cannot get men to work at a Bonded Store without allowing them to drink, and I think it is much better, at stated hours, to give the men a glass of grog, than to attempt to prohibit them taking it altogether.

73. You think you should not muzzle the ox that treads out the corn? From my experience I should say that you cannot employ a man at a brewery, a distillery, or any other place of a similar kind, without allowing him to drink.

74. If a man is surrounded with spirits you must let him taste them? Yes.

75. On the landing upon a wharf of spirits intended to be placed in bond, is it always gauged? It should be; that is the order of the Collector of Customs.

76. And then it becomes the duty of the Customs, through its officers, to see that these goods are deposited in a Bonded Store? It is the duty of the Landing Waiter to forward a permit, a dray ticket, or cart note, to the warehouse, and in the evening, before he leaves his work, he ought to ascertain that these goods are received and properly housed.

77. Is it not the duty of the Customs' Department to see that these goods are kept in their custody until they are bonded in the store? I think not; I think that is a responsibility which we incur when we sign the bond. We incur the risk, for instance, of a dray conveying spirits from a wharf to a store. It would be an enormous expense to the revenue to send an officer with every dray.

78. Then a dray load of spirits which has not paid duty, is placed in the custody of an ordinary drayman for transmission to a Bonded Store which may be at the other end of the town? Accompanied by a written permit; and any constable could seize the spirits if the drayman could not produce that, or explain satisfactorily.

79. The permit states that there are a certain number of casks on the dray? Yes; it gives the mark and number.

80. What check is there that the drayman does not drive his dray into a yard or any other place, take half the spirits out of the hogsheads, and either leave them in that condition, or fill them up with water or an inferior spirit? Because the time would not admit of it. No spirits, without a special authority given by the Collector, can be landed after twelve o'clock, or I believe they go on now till one, and before three the wharfs ought always to be clear of them.

81. What check is there upon the drayman whether he is one hour or an hour and a-half going to Miller's Wharf, for instance? None. That is one of the risks we take in signing the bond.

82. In such a case as I have supposed of goods, after having been gauged on the wharf, being committed to the custody of an ordinary drayman who abstracts half the spirits, as it is not re-gauged on entering the Bonded Store, and may remain there for two years, who is responsible? An ullage cask could not be received for a full one, but if it were reduced in strength we should not find that out until the party owning it came to export it or to pay the duty. It might, as you say, remain two years undiscovered.

83. Does not that strike you as a great neglect of duty on the part of the proper authorities? While you have Bonded Stores straggling about the town as at present, it is impossible, with the number of men the Collector has at present at his disposal, to do any other.

84. Is there any necessity for placing so large an amount of property at the mercy of a common drayman? I believe there are twenty-three warehouses in Sydney, say each of these has six drays, that is one hundred and thirty-eight drays all going to twenty-three different points. To perform the duty of accompanying them, at least twenty officers would be necessary.

85. That proves the imperfection and rottenness of the system? I certainly object to the manner in which licenses for Bonded Stores in different parts of the town have been granted, some of them in positions where it is impossible they can be under the control of the Collector, for instance, under a chapel. There are several private stores unnecessary—Mr. Smith's, and others.

86. *By the Chairman:* What Mr. Smith? John Smith that is in Darling Harbour. In former years there was one at Dixon's, but the license for that was cancelled some time ago. I think all private Bonded Stores should be done away.

87. *By Mr. Weekes:* Taking into consideration the unprotected state in which spirits are removed from the wharfs to the Bonded Stores, it is impossible to estimate the amount of loss arising to the revenue? No, I do not say that, for I think the risk of detection is so

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- great that no man would incur it—the penalty is so very heavy; the least infringement of the Customs' Act renders the party liable to a penalty of £100.
88. Would not the remedy in this case be against the drayman? No; the Solicitor for the Customs, if there were any such person here, would sue the persons signing the bond at the Custom House, and would make them pay double the amount of the duty.
89. You think the bond given by the merchant and the storekeeper is the sole protection, as it is not the duty of the officer at the store to check the condition in which they find the casks? Yes. In the same way in Scotland whiskey is sent to many parts of the country by railway, or by any other public conveyance.
90. There, I apprehend, the Railway proprietors would be liable? Yes, or whoever they could find had cognizance of it.
91. Is it not customary to open cases of cigars and to take out one of the smaller boxes to see the size and weight of the cigars? Yes, that should be done; it is generally done at the store.
92. I mean on first landing, previous to going to the Bonded Store, do they not then go through the same process as spirits—are they not placed on a dray and transmitted to a store? Yes.
93. One of the cases having been opened to ascertain the weight and number of the boxes inside? Yes.
94. So that the drayman on the road to the store would have only to lift the lid of the larger package to remove a quantity of the cigars, and nail down the lid again; in such a case what possible protection would there be? The only way to avoid that would be by employing honest draymen.
95. The present system is open to that objection? Yes it is.
96. In fact the drayman becomes a Customs' officer and guardian of the Queen's revenue for the time being? It is plainly proved to be impracticable in landing to have every package accompanied by an officer.
97. I am alluding now to importing? No officer would walk at the tail of a dray.
98. Then I say that, to all intents and purposes, a common drayman becomes, for the time, a guardian of the Queen's revenue? Yes. In the same way, I may say, I am carrying a quantity of gold to the bank, but I do not carry it myself; I employ a porter to do it.
99. But you keep pretty close upon his heels—the same principle exists in exporting? Yes. So do the Customs' Authorities see every day the goods are sent to their proper destination. There is a great discrepancy in weighing goods in landing; it all depends upon the officers, some are more liberal in giving tare than others. It appears to me that there should be a tare fixed for packages of all dimensions, such as cases of cigars, as is done with bags of sugar. It happened that two tobacconists, Aldis and Leigh, received each a consignment of the same description of cigars in the same ship. One officer weighed Aldis' and another Leigh's; the latter gave Leigh the benefit of one pound in the weight, he gave the weight as seven pounds; while the officer who weighed Aldis', stated the weight to be eight pounds. Now I think all No. 2 or No. 3 Manilas should be a fixed weight, upon which a certain amount of duty should be payable. In looking at the London Customs' Regulations, I find that in all sugar warehouses three per cent. is allowed every three months for wastage. Now as we have to find the scales and weights for weighing the sugar when it is received into our stores, and as it is attended with considerable time and labor to re-weigh it, I think we ought to be allowed wastage according to the time it has been in our stores. At present we are required to re-weigh the sugar, and both the Government and ourselves are put to great expense and loss of time, as we cannot send out a ton of sugar without the presence of an officer.
100. Bonded goods, waterborne to the various wharfs are also placed in the uncontrolled custody of puntmen? I cannot positively answer that question, because being a Bonded Storekeeper, situated as my store is, I take all my goods by dray; all my goods are land borne. I believe they go round in the punt without an officer, but I cannot positively say; I know however, that spirits go up to the warehouses without an officer.
101. *By Mr. Campbell:* In all cases? Very nearly all; it is very seldom now you see them in charge of an officer.
102. I understood you to say with no exception? Not now, because they send cart notes instead of an officer.
103. *By Mr. Weekes:* Did I understand you to say that more stores are licensed than are necessary, merely for the convenience of private individuals? Yes; I do not think licenses for Bonded Stores should be given to merchants merely for the storage of their own goods.
104. Do you think it would be a desirable change that Government should be their own bonders? It was a matter of surprise to me many years ago, when Government had plenty of ground at the Circular Quay, that there was not a range of stores erected there, and I believe it was suggested to the Government by many merchants. I am of opinion that it would be much better than the present plan, provided of course, you compensated the present storekeepers; you could not lose sight of that.
105. *By Mr. Holt:* Do you think notice would not be sufficient? No, I do not think so; because many merchants have built stores for Bonded Stores; that on Campbell's Wharf was built specially for that purpose.
106. Would they not do for free stores? No; they are built for Bonded Stores.
107. *By the Chairman:* Is it necessary for these persons to get a sanction from the Collector of Customs beforehand? It has been the case; I know it was the case with Unwin's, the Argyll Bonded Store, of which I took the lease; before a stone was laid the Governor and the Collector of Customs promised it should be licensed, because stores were so much wanted.
108. *By Mr. Holt:* Other persons, as the Messrs. Campbell—did they apply? I cannot say.
109. *By Mr. Buckley:* You say as far as your own store is concerned, you know what takes place, but have you no idea of what takes place at other stores—whether there are any irregularities.

irregularities practised? No. It is an old saying "Two of a trade never agree," and I do not think it prudent to pry into other stores; but as a Spirit Merchant, I have frequently had occasion to clear spirits at other stores, and I have generally found them well conducted.

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110. No irregularities, such as the abstraction of goods, have come under your notice? No; I only know of one instance, where three kegs of tobacco were irregularly delivered; some officers were then dismissed, and among them one named Douelly. Twice or three times Bonded Stores have been broken into in the night.

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111. You never heard of a syphon having been used, and spirits extracted through the window? Never.

112. Speaking of delivering goods from a Bonded Store—are you aware that it has been the practice to deliver goods in Sydney without a proper entry? There was one very hard case came under my notice, connected with a person of the name of Magrath; he was dismissed for delivering some goods to Messrs. Smith and Campbell, on their promise to pay the duty in a few minutes. He was a very honest man, and the duty was merely nominal; an *ad valorem* duty on some two or three hundred pounds, and he had the guarantee of a respectable merchant that in a few minutes the officer would receive the warrant.

113. That was done purely as a matter of convenience to the parties? Yes.

114. You are not aware that that is done both with regard to tobacco and spirits? As far as my own experience goes, I know they are very strict; if I wanted even a case of gin five minutes before duty was paid I could not get it, neither would I ask for it.

115. You have not heard of transactions of that kind? No.

116. With reference to the carting of spirits—is the fact of drays not being accompanied by an officer known to the Collector of Customs; is it done with his cognizance? Yes, to the best of my knowledge it is by his express instruction that cart notes are substituted in landing.

117. You say that in importing a quantity of spirits you enter into a bond for the payment of double the amount of duty unless they are satisfactorily accounted for? Yes.

118. Do you consider that you have the entire risk? Yes.

119. Does the Government incur no responsibility to open these casks, and test the strength of the spirits while they are in the store? No. I consider that it is a boon to the merchant; and for the risk he runs the Government say, "you may bond your goods in a store approved of for the purpose, and you will not be required to pay the duty until you want them."

120. Do you think the Government is justified in exposing the merchants to this risk; supposing, for instance, the storekeeper were disposed to act dishonestly? With the staff at the disposal of the Collector of Customs, it would be impossible to act otherwise.

121. As a matter of equity, is it equitable for the Government to place you in this position without taking any responsibility upon themselves? Yes, I think so; I think, as I have said, it is a boon to the merchant, by allowing him credit for the payment of the duty.

122. From your experience, you do not think either that the individual who exports spirits or the public revenue suffers by this means? No. There are several officers of Customs, for instance the Landing Surveyor, Mr. Garling, who are in the habit of visiting the warehouses two or three times a week, and every day he is at the principal wharfs—he is generally on that duty from eleven to one o'clock. Spirits are generally landed at the principal Suffrance Wharfs, and it would be next to impossible for anything wrong to be carried on with a number of eyes watching, and the Locker doing his duty at the other end.

123. After these spirits have been gauged and tested on the wharf, is it the practice to secure the bungs in the same manner as when they were landed? No; they are not tinned over; we are called upon to find a fresh bung cloth. It is the duty of the storekeeper to send a cooper, and the Landing Waiter's instructions are to see that the casks are delivered to the storekeeper in merchantable condition.

124. You have spoken of the permits, that it would be better to adopt them—in what way would it be better than the present system? Sometimes we have to trust to a Tide Waiter, in receipt of, I believe, twelve shillings a day, who may be on duty one day and off duty the next week. I would have the principal officer, the Landing Waiter, to receive the goods and see them properly shipped. I have signed an export bond for several thousand pounds in the morning, and then, in order to get the work done and the goods shipped, have frequently had to pay them for over hours.

125. Do they usually loiter and idle away their time for the purpose of securing this payment for over hours? If any portion of the department is badly managed it is that; it is greatly neglected; it is a nuisance to the public, as well as the cause of great loss of time and money to the Government.

126. Do you think the inefficiency of these officers arises from their intemperate habits? There have been some intemperate men in the Custom House, but they are rooted out of the establishment; several of them have been dismissed.

127. Are there none now? I cannot say; there may be one or two.

128. Is it not notorious that parties frequenting these wharfs find these men in a state of intoxication constantly—almost every hour of the day. Are there not instances of this kind you have seen and known? Yes; from the ill effect of putting men on a duty where it is impossible for them to keep sober. I have seen them labouring under the effects of the sun, combined with the taking a glass of brandy and water.

129. Do you know none of these officers at the present moment to be in the habit of suffering from *delirium tremens* every now and again? I think there is one instance.

130. Not more than one? I do not know of more than one.

131. This permit, you propose, should be signed by what Officer of the Customs? We now pass five entries, and the fifth entry might be signed by the Chief Clerk, addressed to the Landing Waiter at Campbell's Wharf or Circular Quay; and any officer could seize spirits not accompanied by a permit. I would strengthen the Landing Waiters' Department, and

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do away with the Export Officer's entirely. I would have two Landing Waiters on each wharf to perform the duties.

132. You were speaking of entries just now, do you think they are unnecessarily multiplied at the Customs? Yes. We are called upon from the warehouses to make four entries; why we should make more than two I am at a loss to know. I can understand one being required for the Warehouse Department, and one for the Landing Waiters'; but by the present system four sets of books have to be kept in the Custom House instead of two. There are four entries for bonded, and three for free goods; and I do not see why I should be called upon to pass a double set of entries merely that the Customs may be enabled, if an Honorable Member of the Assembly moves for returns, to prepare a statement in detail of all imports and exports.

133. What mode would you adopt to enable the agent of a vessel to make only one entry; how would you furnish him with the information to enable him to make the entry—for instance, supposing there are 100 cases of mustard? This is my suggestion to meet that: To require all parties to forward to the agents of a ship within a certain number of hours or days, particulars of goods imported to them, and failing to do so that the goods should be liable to be opened. If such an arrangement were carried out there would be no difficulty in the matter, as the importers would not run the risk of having valuable cases of drapery and haberdashery broken open. I would issue an order that the particulars should be furnished to the agent within forty-eight hours, or three clear working days, of the ship's arrival, and the agent should then pass one entry for the entire quantity of one particular kind of goods. When I acted as a Custom House Agent, I have passed as many as fifty or sixty entries for single packages by a London ship. That has cost the labour of entering fifty or sixty lines in four books in the Custom House.

134. Then, with reference to the Custom House Department, you are of opinion that these books of entries may be kept more simply and less expensively? Yes; for instance, say the "Vimeira" brought in 250 packages of boots and shoes, these came out to some thirty different people, and this involved thirty different entries in the books at the Custom House.

135. You think a considerable amount of labor might be saved to the Customs if this system were adopted with free goods? Yes.

136. Are you prepared to say what reduction might be made in the Custom House staff by the alteration you suggest? I should say that by economising the time, the duties might be performed by half the number of clerks in the Long Room.

137. You have spoken of the Lockers being under bond—by that, I suppose, you mean that they give security—are you aware whether that security is given here or in England? It is given to the Collector of Customs here.

138. Are you aware whether that has been done since the Customs' Department has been handed over to the Colony? Yes; I am bondsman for several officers.

139. With reference to the Commissariat Store at the Queen's Wharf, what is your opinion of that as a central position for a Bonded Store? I think that alone would be of no use to the Government; for without you make a row of stores sufficiently large to hold all the bonded goods coming to the country, it would be of no service. It would cause a great deal of scrambling, unless you put the Government in a position to hold the bonding of the Colony, as people would prefer putting their goods in a Government to putting them in a private Bonded Store. I need not tell you that the Commissariat Stores would not hold one-fifth of the goods now in bond.

140. Are these stores, so far as their extent will admit, suitable for the purpose as they are now constructed? With very little alteration, very strong Bonded Warehouses might be made of them.

141. In the event of requiring additional accommodation, is there room to extend them in any direction? Yes. There is no private ground from the Commissariat to Campbell's Wharf. Where the old Water Police Office and the Ordnance Ground is, they might be extended. The old Dock Yard is now a perfect nuisance. A row of stores might be built there, taking the Commissariat Stores as the southernmost.

142. Would that be as convenient to the public generally as the Bonded Stores are now? Yes, because we must come to the Custom House to clear our goods.

143. Would it be as convenient to have the store erected somewhere on the other side, near the Custom House? I think it would be desirable to have them in one block. I do not think an objection could be raised to either side; either side would be equally convenient. The only difference would be, that you would come down Pitt-street—which I consider the principal street of the town—to the Commissariat Store, and the Bonded Stores would thus be a continuation of that street.

144. If there were a general Bonded Store erected by the Government, would it, in your opinion, greatly decrease the present amount of expenditure in the way of officers? Yes, because you could easily introduce a clause in the Warehouse Act compelling us to land our goods on the Circular Quay, to have all our spirits gauged on one wharf, and put in one block of the building.

145. In the event of a cask being injured by conveyance on a dray, or lost by a lighter going down, whose loss would that be? If it were explained to the satisfaction of the Collector of Customs that it was accidental, the duty would be remitted. The other matter is only between one merchant and another; the Customs have nothing to do with disputes of that nature.

146. Their interest is in the duty alone? Their interest is in the duty alone; they take no cognizance of the rights of property.

147. With reference to the conveyance of cigars—you say that it is quite possible for a drayman when conveying a case from a wharf to a store, to raise the lid and abstract some of the cigars from the smaller box which had been opened previously; do you not think, if the officer at the Bonded Store exercised proper care, he would ascertain on what boxes there were such losses? Yes, I do.



- 148. You think it is the duty of the officer to turn over the cases, and to see that they are entire? I should consider it to be my duty if I were an officer. I am answerable to the Government to deliver up a case of cigars containing ten boxes, and if I produce one containing only nine, I am compelled to pay the duty upon ten, unless I can shew that the box was deficient when delivered to me.
- 149. You are not aware whether any instances of that kind have occurred? I am not. I have very few cigars in my warehouse, as it is not suitable for that purpose.
- 150. *By the Chairman:* Some parties have suggested the appointment of an Inspector of Bonded Warehouses? I think if the Landing Surveyor does his duty, he could perform all that would be required in the way of supervision. As a merchant of Sydney I was surprised to see the item on the Estimates, and still more when the House allowed it to pass. The office of Senior Landing Surveyor includes, in my opinion, the survey of every thing.
- 151. Then, in fact, this new appointment takes the most important part of his duties from him? Yes, you only leave him as an assistant to the Collector, to answer questions which I think is unnecessary.

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WEDNESDAY, 28 JANUARY, 1857.

**Present:—**

MR. BUCKLEY,		MR. IRVING,
MR. EGAN,		MR. NICHOLS,
	MR. WEEKES.	

GEORGE ROBERT NICHOLS, ESQUIRE, IN THE CHAIR.

Mr. William Henry Aldis called in and examined:—

- 1. *By the Chairman:* You are a tobacco merchant? I am.
- 2. Are you a large importer of tobacco? I cannot say I am a large importer. I am a very large dealer in tobacco.
- 3. Are you a purchaser of goods in bond? Yes; very largely. I have been doing business to the extent of £50,000 a year, or thereabouts. I am not an importer generally.
- 4. You have been for many years in the trade? Yes; I am the oldest tobaccoist in the Colony.
- 5. Do you ever find any deficiency in the weight of the goods delivered to you from the Bonded Stores? Yes, repeatedly—very great mistakes. I have had a very recent instance of a discrepancy on the part of the Custom House officers with respect to the weight, and such mistakes are everlastingly occurring.
- 6. Do you mean that there is a difference between the weight of the goods when issued from the Bonded Stores, and the weight as given at the Custom House? Yes.
- 7. *By Mr. Irving:* There are so many mistakes that you have no confidence in the weights taken at the Customs? No; I would not put any confidence in the weights of the Customs, and those parties who deal in the article are of the same opinion as myself with reference to that matter. I do sometimes buy in bond at the certificate weight, but I generally have the goods weighed immediately after, and frequently find a considerable deficiency.
- 8. That would arise from the neglect of the Custom House officer? Yes.
- 9. Have you found the deficiency in weight very large? Very large. In the instance to which I just alluded there was a deficiency of as much as 10 and 11 lbs. in each package.
- 10. In what quantity? About four hundred-pound packages. The package was in the same state as when it entered the store, but the mistake was made in the weighing; I cannot say how, by whom, or under what circumstances; all I can say is, that I discovered it, and that I have not yet got the money for the deficiency from the party from whom I purchased the tobacco. The discrepancy in the weight was a very glaring one indeed.
- 11. Do you find any difficulty arise to you from dutiable goods being bonded in different Warehouses? Generally speaking, all the goods I can put into my own stores I do, and when I cannot I put them in the next nearest to me, into Pollard's. It is very expensive to have to send to Moore's and other stores at a great distance for goods. It costs a great deal for carriage.
- 12. Besides the inconvenience? Yes.
- 13. It creates inconvenience in mercantile transactions? Yes, and loss.
- 14. *By Mr. Irving:* And loss of time? Yes, loss of time and loss of money.
- 15. *By the Chairman:* You think it would be better to have one Bonding Establishment where dutiable goods—such as spirits and tobacco—could be stored? Yes, it would save a vast expense to the public and to the Government too.
- 16. To the merchants and to the Government? Merchants—at least the owners of Bonded Stores—would be the losers.
- 17. But to the mercantile community generally it would be an advantage? Yes.
- 18. *By Mr. Irving:* That is, you think if there were only one Bonded Store it would be a great advantage to the trading community? Yes; the bonding business ought to be concentrated, and brought into a focus under the eye of the Government, because I do not consider it under the eye of the Government when stores are scattered about the City, at such a distance from each other.
- 19. I suppose you are not in the habit of going to Bonded Stores? Well, I do go; I am at the Custom House almost every day.
- 20. Do you find the Lockers in attendance at the proper time? I think they are. I think the old servants in the Custom House are, generally speaking, attentive; but I could not answer that question.

Mr. W. H. Aldis.  
28 Jan., 1857.

- Mr. W. H. Aldis.  
28 Jan., 1857.
21. Do you think the present staff efficient—are the officers who now hold the position of Lockers such as you would appoint? Taken as a body I could not say that. It is a very delicate matter, and I do not like to point to individual cases.
22. You would not like to give an opinion separately; but, taking the whole, would you consider the Lockers efficient and qualified for the duties they have to perform? The Lockers?
23. I will include the Customs' Department generally? I think, then, they are anything but efficient as a body, and have often told them so.
24. *By the Chairman:* Do you find any difficulty in passing entries? I do not, generally, being treated perhaps more civilly than others; I might say why, knowing how to remedy these complaints. You cannot have a greater proof of the inefficiency of the Customs than the continued re-weighs and re-gauges, one man being engaged doing the duty that ought to have been done by another previously.
25. Have you ever had to pay extra for opening Bonded Warehouses? No; the Warehouses are open when I go there. I generally pay for sampling—I pay a man a shilling for opening the package.
26. *By Mr. Irving:* The Locker? Not the Locker, but the laboring man in the store; he does the work, and generally gets the money.
27. Has your attention been drawn to the Customs in other matters, as well as in your department, with reference to tobacco and cigars? No; I am so fully employed in my own business that I cannot attend to other matters: I may hear such a thing as a matter of gossip.
28. You could not give an opinion as to the bonding of spirits or wines? No, I could not.
29. Can you give any opinion as to the mode of passing entries for exports—whether there can be any improvement? I think there is a vast deal of parade—of unnecessary form and ceremony, which is a very great obstruction to the export business.
30. I suppose you are not acquainted with the details of the business? I export pretty largely.
31. Are you prepared to suggest any improvement in any way? I cannot say that I am; but I heard a suggestion made the other day—it was as regards permits for exports; that would facilitate the thing. I do not see why we should require a Custom House Officer to accompany the goods. I believe the permit would answer every purpose.
32. You think the permit system in existence in England would be an improvement? *That* part of the permit system. I should prefer being under a heavy bond. It would simplify the business. I would rather be under any responsibility than I would go through the present Customs' forms. I know very little of the permit system in England, not having studied the matter.
33. What is your experience as regards the bonding of tobacco and cigars—you say you very often purchase on ship board? Always, if I can, in order to avoid the mistakes of the Customs in weighing.
34. Have you ever observed the system pursued with respect to the weighing of cases of tobacco or cigars, whether they are weighed on the wharf or in the store? I do not think there is any particular system; sometimes they are weighed at the stores, sometimes at the wharf.
35. Sometimes, perhaps, not at all? I cannot say.
36. *By the Chairman:* Does the Customs' Officer go with the goods from the wharf to the stores? No; he ought to do so, according to the regulations.
37. Who has charge then? The drayman.
38. Any man you may hire on the wharf? Yes, he is responsible; he brings them to my store; then I have to get the Locker to put them into the store, unless it is one like Pollard's, which is open through the day, and then they are taken in there direct. They have a very loose system of doing business in the weighing of cigars. A very extraordinary case of negligence occurred a few months ago. A brother tobacconist had twenty-five cases of cigars in a ship which came from Manila. I had the same quantity by the same vessel. The cigars were Havana-shaped Manilas; they were alike in every respect as regarded number, size, and weight. Mine were charged to me at eighty-six pounds and a quarter. Some short time afterwards, I discovered that my neighbour had disposed of some of his to a customer of mine at a lower price than I could afford to supply him with them. I could not understand how this could be done, until, on reference to the books at the Custom House, I found that his cigars had been charged duty at the rate of 72 or 73 lbs. a case. I went to the Landing Waiter, Mr. Passmore, (a very gentlemanly man,) and told him of the discrepancy in the weights, and that I had lost my customer in consequence of my neighbour underselling me; and he said there must have been some mistake in the matter, that mine were not the same cigars as Mr. Leigh's, (the party to whom I have referred). I said, "You'll excuse me —"
39. Was he the officer that weighed your cigars? It was he who weighed mine with the other party's. He said they were not the same cigars—that they were not by the same ship—that they were old dry cigars. I said, "Mr. Passmore, you must have been deceived; I know for a fact, and can prove it, that they were exactly the same." Mr. Passmore is a very gentlemanly man, and said, "I will go and enquire about it at Leigh's; I will see into the matter, but I am sure you are mistaken, Mr. Aldis." He went and enquired, and, on his return, said, "I know how it is, I made the mistake in the taring." I said, "nothing of the sort, I weighed three or four boxes and they were very correct—it will not suit me—if you don't like to look into it, I shall go to Mr. Garling." He said, "go to Mr. Garling, you had better, as you seem to get rather warm about it." I did feel a little warm, for it made a difference of some £30 or £40 to me. I then went to Mr. Garling, who promised to go to Leigh's store and see into the matter. After procuring the shipping marks, Mr. Garling went into the store, and selecting a promiscuous case, had it weighed, when he found the weights, as I had stated, to correspond with mine to a quarter of an ounce—the weights being altered in the Customs books to 86½. I believe from that time to this no steps have

been

been taken in the matter. I never applied to Colonel Gibbes, but was advised to write or see Mr. Donaldson, who was then at the head of the Government.

40. They made you no allowance? I could not expect any allowance, but I expected that my competitor in business would be charged the same rate as myself.

41. *By Mr. Buckley:* How long is it since this occurred? About six or eight months' ago. I consider this one of the most glaring cases of negligence.

42. Who superintended the weighing of the cigars on the part of Mr. Leigh? That I cannot say; but there is another officer in Leigh's store.

43. They were not both weighed at the same time? Almost simultaneously. They came out in the same ship together, and I believe that there was some mistake about them, for Mr. Leigh was going to have my cigars, only mine were marked "W. H. A.," while his were marked "J. M. L."

44. Is it customary to weigh cigars in the store where they are bonded? I think it ought to be customary.

45. You say Mr. Passmore weighed the other lot of cigars as well as yours? Yes. I expressed myself more freely in the matter to Mr. Garling than I have to-day.

46. Do you suppose the difference between the two weighings arose from any clerical error? I should not like to say how it arose; so far as Mr. Passmore is concerned (who is a very gentlemanly fellow), I think it was through negligence. How it was done in the store I know not.

47. *By Mr. Irving:* How could it be through negligence, if he was so particular in weighing the different boxes of your cigars—there were no symptoms of negligence there? I do not think there was any collusion in any way by Mr. Passmore; I believe him to be too respectable. He was deceived by some one.

48. Do you think that there was any roguery in the transaction by any party? I am afraid there was, but it is not for me to say; I am not a detective. Such is the case.

49. It appears you were a detective in this instance? Yes, not a permanent one—not a paid one; I paid for being a detective. I think the difference of duty might have been about £30 or £40.

50. *By Mr. Buckley:* Do you think, if the other party had looked as closely after the weighing as you did, anything of the kind could have occurred? I was looking after my interest, and, I presume, those who superintended the weighing for Mr. Leigh were looking after theirs. It is not for me to say how it occurred; it has been hinted at by some of my own men.

51. What mode is adopted in taring cases of tobacco or cigars—is it customary to strip tobacco? No; when that is done you destroy it.

52. It has been done to settle disputes? Yes. With respect to cigars, I think it is very absurd to have a dozen different weights for number twos; in one store to have them weighed as 73 lbs. per case, in another to be made to weigh 86 or 89 lbs. or more. As the cigars are bought by the thousand, I think there should be a fixed weight upon this article.

53. There is no principle laid down with regard to taring? They turn the cigars out of the box, and weigh the box, and weigh the cigars; but I do not think it necessary to do that unless there is some extraordinary difference in the size of the cigars. I think there ought to be a fixed weight; I think the staple of consumption, which is the No. 2 cigar, should certainly have a fixed weight.

54. In your opinion this system should be adopted for the sake of avoiding mistakes of this kind? Yes; and also for the sake of keeping people honest, for the weight of the cigars cannot vary to the extent reported by the Customs officers.

55. *By the Chairman:* These cigars are packed by the Spanish Government? Yes.

56. And have some brand on them? Yes. I believe they have established a rule of the sort at Melbourne—to have a fixed rate for every 10,000 No. 2 cigars.

57. *By Mr. Buckley:* You have given an instance with regard to the weights of cigars—have many others of the same character come under your notice? There have been continual discrepancies. This is one of the most recent—perhaps the most flagrant one. The idea of losing £30 and upwards on twenty-five cases of cigars (the difference between me and my neighbour on the other side) is ruinous.

58. *By Mr. Weekes:* Could it have happened but from a neglect of duty on the part of the officers? I do not wish to insinuate anything improper, but at the same time I believe Mr. Passmore is perfectly scatheless with regard to any collusion. It might be other persons behind the scenes; for instance, there is a Custom House officer in the store, I believe—what could he have been doing at the time? Mr. Garling will, however, give you all other particulars.

59. *By Mr. Irving:* Do you think that the same thing has taken place as regards the bonding of tobacco? Yes, of course it could. What is to prevent it? There is nothing to prevent it. Here is the other instance of negligence (I do not know how this was done, but it was): About three months ago I had twelve or fourteen tierces of Barrett's tobacco. That is an article that does not waste to the extent of any other tobacco, being years before it loses any quantity; it is such an immense pressure that without being in any package at all it is almost hermetically sealed against evaporation. I had these re-weighed, and found them some ten or eleven pounds short each package.

60. *By the Chairman:* You know the Commissariat Store? Yes, but I think it not large enough for a Bonded Store.

61. There is plenty of land attached to it? Yes. I do not know that I was ever in it.

62. *By Mr. Egan:* Do you think that would be a good situation for a Bonded Store? Yes.

63. *By Mr. Buckley:* You were speaking a short time since about permits—you think that there should be permits to ship tobacco out of bond, without requiring any operation or action of the Custom House Officer—how would you accomplish that from your store? I have never studied that.

Mr. W. H.  
Aldis.

28 Jan., 1857.

- Mr. W. H. Aldis. 64. Is it your opinion that the forms of the Custom House might be lessened in the way of passing entries? I think the Customs might be altogether very much improved: I have often imagined so.
- 28 Jan., 1857. 65. *By Mr. Weekes*: If there have been many instances such as you have been recounting, the Customs Department can have been of very little use? *I do not see* what utility there is in it; I do not think you need ask that question.
66. I think you said that you were aware of many other instances besides this one that you have mentioned? Discrepancies in the weights are very often occurring; how they occur of course I cannot state.
67. So that, so far as the whole tobacco and cigar importation is concerned, you have reason to believe that there is negligence running through the whole of the bonded system? I will tell you how that can be illustrated better than by any witness that can be called—by looking to the re-weighs and re-gauges, which must be a perfect abomination. The everlasting re-weighs and re-gauges for instance on articles coming in and going out of bond. I discovered the error in the weight of the twelve or fourteen half-tierces of Barratt's tobacco accidentally from a customer, who is more correct, or has more time to weigh than I have, that the package is eight or ten pounds short, and then I have to allow him the duty as well as the tobacco, having previously paid the duty to the Custom House.
68. *By Mr. Weekes*: When you called Mr. Garling's attention to this instance of neglect on the part of the officer, do you know whether he reproved the officer or reported the matter to the Collector? I do not know whether Mr. Garling ever went to the Collector.
69. You are not aware that he did in this instance? No.
70. Are you aware whether he gave any reproof to Mr. Passmore? Yes, he did. I said that either Mr. Passmore should pay the duty or Mr. Sawyer, that is the party who paid duty and received the twenty-five cases of cigars corresponding with mine. He succeeded Mr. Leigh in his business.
71. *By the Chairman*: Do you know whether the difference of duty has ever been paid? I do not believe that it has, though I cannot say; I am not at the receipt of Customs.

## APPENDIX A.

## MEMO.

Particulars of the two instances of negligence referred to in the foregoing Evidence.

The 25 cases of cigars were by the "Adèle," from Manila, in May, 1856, marked  $\frac{Z}{426}$  § 1 to 25; the Customs' weight, and upon which I paid duty, was  $86\frac{1}{2}$  lbs. The 25 cases of cigars, free, by same ship, either Leigh's or Sawyer's, were marked  $\frac{O}{427}$  § 1 to 25, and the Customs' weight, when I pointed out the discrepancy, was 77 lbs., at which rate Mr. Sawyer had paid duty upon seven or eight cases. On looking at the Landing Waiter's, or red book, this week, I found there had been *several alterations, and a variety of weights, to the 25 cases*. The loss (or difference) to the revenue and myself on these 25 cases of cigars was—taking one at  $86\frac{1}{2}$  lbs. per case, and the other at 77 lbs., exactly £34 13s. 9d.

The other case, Barrett's tobacco, (referred to), was a small parcel of 14 half-tierces tobacco, per "Catteaux Wattell," marked  $\frac{Z}{417}$ , and bonded at Lloyd's 25th February, 1856, and upon which there was a deficiency in the original weights of about 10 lbs. per package.

WM. H. ALDIS.

SEPARATE

## SEPARATE APPENDIX.

*The Collector of Customs to the Colonial Treasurer, respecting the grounds upon which some of the Officers of the Customs Department do not give Bond.*

No. 4.

*Custom House, Sydney,  
30 October, 1856.*

SIR,

I do myself the honor to acknowledge the receipt of your letter of the 28th instant, No. 56-1237, requesting me to inform you whether some Officers of this Department, viz., Lockers, Tide Waiters, Baggage Searchers, and the Distillery Clerk, have not omitted to give Bond for the due performance of their duty; and I beg to inform you, that it is not the practice of this Service to require security from Lockers and Tide Waiters, as will be seen by the enclosed copy of a letter from the Honorable the Commissioners of Customs.

2. The office of Baggage Searcher is a very inferior one, and such as I think I should not be justified in requiring the parties to enter into bond for.

3. The Distillery Warehouse Clerk, although attached to this Department, does not in fact belong to it, and is not paid by me, but as Mr. Emmott (who is a nephew of Mr. W. Wentworth) is in the same position as other Clerks, he can, of course, be called upon for a similar bond.

I have, &amp;c.,

J. GIBBES,  
Collector of Customs.

The Honorable  
The Colonial Treasurer.

No. 25.

GENTLEMEN,

With reference to your letter of the 16th December last, No. 52, enclosing the Bonds of certain officers at your Port, I have it in command to acquaint you that the Bonds in question have not been taken in the form prescribed by the Board's Regulations, and to direct you to call upon the undermentioned persons to enter into renewed security, according to the form of Bond herewith transmitted, viz. :—

Mr. James Philps, 2nd Clerk.  
" W. Gibbes, 3rd "  
" Thomas Oliver, Landing Waiter.  
" J. L. Dean, do.  
" Fredk. Garling, do.  
" D. Goodsir, do.

In respect to the Lockers and Tide Waiters, I am directed to acquaint you that it is not the practice in the United Kingdom to require officers of this class to enter into security, and will not therefore be necessary for the Tide Waiters and Lockers at your Port to enter into renewed bond. I am further directed to return the bond given by the Commander of the "Prince George," who, being an officer under the orders of the Colonial Government, should not have been required to enter into bond to this Department.

I am, &amp;c.,

(Signed) W. MACLEA,  
Custom House, London,  
27 June, 1835.

Sydney, New South Wales.

*Custom House Officers who have given no security :—*

Henry Anderson...1st Locker.	S. Snow .....9th Locker.
J. G. Turner .....2nd "	G. W. Russell...1st Tide Waiter.
W. Carron .....3rd "	M. G. Brown ...2nd "
A. Edinborough...4th "	G. Newton .....3rd "
T. B. Corbett .....5th "	T. Dwyer .....4th "
W. King.....6th "	D. Girvan .....1st Baggage Searcher.
W. Hunt.....7th "	N. Rundle .....2nd "
J. Hagley .....8th "	G. Emmett.....Distillery Clerk.



1856.

## NEW SOUTH WALES.

## STEAM POSTAL COMMUNICATION.

(DESPATCH FROM SECRETARY OF STATE.)

*Ordered by the Legislative Assembly to be Printed, 23 September, 1856.*

THE SECRETARY OF STATE FOR THE COLONIES to GOVERNOR SIR WILLIAM DENISON.

(CIRCULAR.)

Downing-street,

5 July, 1856.

SIR,

I have great satisfaction in being enabled to inform you, that a Contract, has been agreed upon for the service of the Postal Communication between this country and Australia, by which, I trust, that this all-important object will be secured in the most regular and satisfactory manner. I regret that I am not able to send out the Contract itself by this mail, but I transmit a memorandum from the Treasury upon it, which will put the Colonies in possession of its main provisions.

From the great interest which has been evinced in this question by the Legislatures and people of Australia, I feel sure that I have met their wishes by consenting to the payment of a larger sum for a complete and well secured system of rapid and direct communication, rather than by endeavouring, at a smaller cost, to obtain one that does not equally well fulfil those essential conditions.

I have, &amp;c.,

H. LABOUCHERE.

GOVERNOR SIR WILLIAM DENISON,  
&c., &c., &c.*MEMORANDUM of terms for the Australian Mail Contract.*

1. The Contractors agree to perform the following service for £185,000 a year.
2. To convey, by full power screw steamers, the Mail and Passengers from Southampton to Melbourne and Sydney monthly each way; the steamers from Suez to Australia to be not less than 2,200 tons burthen.
3. The time from Suez to Melbourne to be 39 days, and from Melbourne to Suez 35 days. The time to be occupied between Suez and Southampton to be 14 days. The route through France *piâ* Marseilles will reduce that time by about 6 days.
4. The route from Suez to Melbourne is to be by Point de Galle; but the whole service is to be performed by vessels entirely distinct from the India Mail.
5. The service is to be performed in the time stated, subject to penalties, which *under no circumstances whatever are to be relinquished, for any delay from whatever cause arising, of £50 for the first day, £100 for the second day, £150 for the third day, and increasing by £50 for each day accumulatively, with a limit only that the penalties for any one voyage shall not exceed the whole subsidy for such voyage.*
6. The first boat is to leave this country in October, to be ready to carry the homeward January Mail from Sydney and Melbourne to Suez; the next boat leaves here in November, for the February Mail from Sydney and Melbourne; the third boat leaves in December, and the fourth in January, for the homeward Mails of March and April; so that after the month of January the service each way will be complete.

Treasury Chambers,  
4 July, 1856.





1856.

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 NEW SOUTH WALES.
 

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# STEAM POSTAL COMMUNICATION.

(CORRESPONDENCE.)

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*Ordered by the Legislative Assembly to be Printed, 6 June, 1856.*

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JAMES A. YOUL, Esq., to THE HONORABLE E. DEAS THOMSON, Esq.

5, *Cleveland Terrace,*  
*Hyde Park, London,*  
 6 March, 1856.

SIR,

I am directed by the Committee of the General Association for the Australian Colonies to transmit, for the information of His Excellency the Governor General, and the Legislature of the Colony of New South Wales, the enclosed Memorial to the Lords of the Treasury, on the re-establishment of Steam Postal Communication with Australia.

I have, &c.,

(Signed) JAMES A. YOUL,  
 Honorary Secretary.

THE HONORABLE  
 E. DEAS THOMSON, Esq.,  
 COLONIAL SECRETARY.

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[Enclosure in the foregoing.]

To the Right Honorable the Lords-Commissioners of Her Majesty's  
Treasury.

THE MEMORIAL adopted at a Meeting of the GENERAL ASSOCIATION for the AUSTRALIAN COLONIES, held in the City of London on the 4th day of March, 1856; W. C. WENTWORTH, Esq., late Member of the Legislature of New South Wales, for the City of Sydney, in the Chair.

HUMBLY SHEWETH,

That your Memorialists approach your Right Honorable Board with the painful conviction that the great Imperial question of Steam Communication with Australia has met with unmerited neglect on the part of Her Majesty's Government.

That in the year 1852, after many years of previous hesitation, and delay, a Postal Steam Service was at length organized on alternate months, *via* the Cape of Good Hope and the Isthmus of Suez.

See proceedings of Parliamentary Committee on Steam Communication, Session 1851, p. xxxi.

That the Bi-monthly Service, *via* the Cape of Good Hope, was a mere experiment, undertaken contrary to the publicly recorded opinion of the Right Honorable the present First Lord of the Admiralty; that such Service was tried under two different Companies and Contractors, and in each case was characterized by failure, and disappointment to the public.

That the Bi-monthly Service, *via* Suez, was, during its continuance, carried out in a more regular and reliable manner, but that the Route was so devious, and the stoppages so numerous, that the passage to Melbourne occupied sixty-four days; the speed maintained, if measured by direct distance, not exceeding six-and-a-half knots per hour, whereas the usual speed on other contract lines is ten knots, or nautical miles per hour.

See Appendix No. 1.

That such last-named Service, in the month of November, 1854, was, without notice, wholly suppressed, nominally on account of the requirements of the war, but your Memorialists are prepared to substantiate that the exigencies of the public service in no way rendered this measure necessary.

See Appendix No. 2, giving statement of average passage of Mail Packets during 1855.

That since the above period our Australian Colonies have been wholly deprived of all Postal Steam Communication, and the result has been, that the transit of letters has been effected with extreme uncertainty and irregularity, the outward Mails having been delivered, upon an average, at Melbourne in 84½ days, and the homeward Mails, from the same place, in London upon an average of 93½ days.

See Treasury Minute, p. 8 & 9.

That your Memorialists now collect, with extreme regret from your Lordships' published Minute, that in lieu of immediately re-establishing a Service which ought never to have been discontinued, you propose first to make a reference to the Colonies, in order to ascertain the exact amount of subsidy each Colony is willing to contribute to the cost of a Postal Steam Line.

That your Memorialists beg respectfully to represent to your Lordships, that such reference must, under any circumstances, be attended with a delay which cannot be estimated at less than eighteen months, even though the various Colonies concerned should then agree amongst themselves, as to the amount of their respective contributions.

That your Memorialists in consequence, feel it to be their duty to impress on your Right Honorable Board that the Colonies expect, that their Steam Postal Service will be re-established by the Imperial Government without any further unnecessary delay, and great disappointment will arise if these their just hopes are not realized.

See Appendix 3, giving statement of Australian British Imports, compiled from Parliamentary Returns.

That your Memorialists would urge on your Lordships, that if the Contract Steam Service between Liverpool and New York were casually interrupted, the Executive would not allow a week to elapse without arranging for its immediate resumption; but in the case of Australia, your Lordships have already permitted its Mail Service to continue in abeyance for seventeen months, and are now about to protract its final re-establishment for a further indefinite period, notwithstanding that its trade with England is proved by Parliamentary Returns to be scarcely less important than that with America, and the regular and speedy transmission of its monthly supply of Gold, averaging a million sterling, would be of incalculable importance to this country.

That

That at no period of our Colonial history has the Imperial Government required, from any Colony, pecuniary contributions for postal purposes; and that in the present instance, to make the voluntary and munificent offers for contribution of the Australian Colonies, a special ground for indefinitely postponing the re-establishment of their Postal Service, originally suppressed without sufficient cause, does not appear to your Memorialists consonant with principles of equity or sound policy.

The Colony of Victoria alone has voted £50,000 per annum. (See Treasury Minute.)

That if your Lordships desire such contributions, they will be best secured by a Treasury Minute, graduating the scale of Postages for each Colony, according as your Lordships may find that the moneys voted by their respective Legislatures are adequate or otherwise; but to refer the question in the manner proposed by your Lordships' Minute, will probably be to throw an apple of discord amongst the Colonies, without obtaining therefrom any practical result.

That your Memorialists observe, with great concern, that your Lordships select no definite route for the conveyance of the Mails, but trust to secure, by a system of penalties, their regular delivery within the contract time.

That your Memorialists entreat your Lordships to remember that the very recent history of the Cape line, amply evidences that really heavy penalties are never enforced, while lighter penalties, such as are provided for in the present notice for tenders, have been paid with a smile by the Contractors; and therefore that a mere system of penalties affords no practical guarantee of any kind to the public for the due performance of a Mail Service.

That your Memorialists submit, with all respect, that the right way to ensure the rapid and due transmission of the Mails is not to rely altogether on penalties, but rather to select the shortest route; and, as is usually done in other branches of the Contract Packet Service, to insist on the employment by the Contractors of First-Class Vessels, with adequate Steam Power, and well-tested speed.

That your Memorialists have satisfied themselves that the shortest route is *via* Suez and Diego Garcia; such being, according to official computation, 3,019 miles shorter than the passage by the Cape of Good Hope; and 2,338 miles shorter than that *via* Panama, the latter traversing 76 degrees of longitude more than the eastern route.

That your Memorialists are also convinced it is for nautical as well as other reasons, highly desirable that the Postal Steamers, without touching at Ceylon as heretofore, should proceed direct from Suez to Melbourne, stopping for coaling purposes only at the Island of Diego Garcia, a dependency of the Crown, situate in the midst of the Indian Ocean, half-way between Arabia and Australia, and possessed of a most excellent and capacious harbour.

That the route *via* Diego Garcia being the shortest of all routes by 2,338 miles, it is evident that, at the required rate of ten miles an hour, the mails admit of being forwarded by it nearly ten days sooner than they can be conveyed by any other line; and if the rate of speed were accelerated to eleven or twelve miles per hour, as is quite practicable, the period of transmission would be reduced in proportion.

That your Memorialists would also observe that, viewing the geographical position of Diego Garcia, a short branch might with facility be organized from this island, which would bring the Mauritius and the Cape of Good Hope into close communication with Australia, and at the same time realize for the two Colonies first named, a speedy and cheap steam connexion with the mother-country, of which great advantage they now continue wholly deprived.

That if your Lordships entertain any doubts as to the superiority of the route to Melbourne, *via* Suez and Diego Garcia, your Memorialists trust your Lordships will refer this question for the consideration of the Hydrographer Royal, in order that thus their confident opinion may be corroborated by official testimony.

That your Memorialists are ready to prove that by adopting this route, and insisting at the same time on an average speed of ten knots an hour from Suez to Melbourne, the Mails may easily be delivered in Melbourne within forty-four days from the date of their leaving London.

That, by the same route, telegraphic intelligence from Australia might be received within forty-two days.

That a trunk line to Melbourne, as being the most central terminus for the Australian Colonies in general, is all that is at present absolutely necessary, and that it should be left to the several Governments of Australia and New Zealand, to direct the organization of the requisite branch lines.

In conclusion, your Memorialists submit that the wealth, intelligence, and great commercial importance of Australia fully entitle her to the best and speediest Postal Service which it is possible to organize; and they would add, that the just expectations of her population will be satisfied with no less; they contend that the close union by steam of Australia with the mother country, will be attended with great results, and they believe that a measure so Imperial in its object, merits, at the hands of the British Government, at least the same degree of support which, in the case of other and less important steam lines, has already so materially assisted the development of our commerce, and the extension of our civilization.

Trusting

Trusting that this their appeal will meet from your Right Honorable Board that consideration which they feel it deserves, your Memorialists earnestly pray,

- 1st. That your Lordships will, without further reference to the Colonies, withdraw the notice for tenders now advertised, and invite tenders for the immediate establishment of a regular and reliable Monthly Postal Steam Communication with Australia.
- 2nd. That in order to obtain the delivery of letters in Melbourne within forty-four days from their leaving London, you will select the shortest route, viz., that *via* Suez and Diego Garcia.
- 3rd. That to secure a uniform speed of ten knots an hour in all weathers, you will not rely altogether on a system of penalties, but rather stipulate that the steam vessels employed by the contractors be first-class ships of 2,200 tons burthen at the least, and be capable of performing, when tested for speed in the usual manner, not less than twelve knots or nautical miles per hour.

And your Memorialists will ever pray, &c.

Signed by Order of the Meeting,

W. C. WENTWORTH,

Chairman.

## APPENDIX.

### No. I.

#### *Suppression of the Australian Postal Steam Service.*

Their Lordships are referred on this head, to the communication addressed by this Association on 15th of August, 1855, to the late Sir WILLIAM MOLESWORTH, as Secretary of State for the Colonies; as also to the excellent letter addressed by the London Australian Postal Association, on the same subject, under date 4th December, 1855, to the present Secretary of State for the Colonies.

From these documents it appears, that although the Australian Postal Line was peremptorily suppressed, the China Line was maintained intact, the relative importance of the two lines being amply evidenced by the fact, that in 1853 the Australian Imports from England came to £14,506,532, while the China Imports amounted only to £1,787,675. Hence it may be said to be proved to demonstration, that whatever may have been the exigencies of the war, there was no necessity for the suppression of the Australian Postal Line; for had the comparatively-speaking unimportant China Mail Service been selected for discontinuance, it is clear that the due transit of the Australian Mails need never have been interrupted. This becomes even more apparent, when it is considered that the relative lengths of the two lines are about equal, and employ the same number of Steam Ships.

### No. II.

#### *Statement showing the Average Duration of the Passages of the Australian Mail Ships, during the Year 1855.*

OUTWARD.				
Sailed.			Arrived.	Days.
January 6	Lightning .....		March 22 .....	75
February 6	Boomerang .....		May 11 .....	94
March 6	Blue Jacket .....		May 13 .....	68
April 5	Marco Polo .....		June 26 .....	82
May 5	Oliver Lang .....		July 31 .....	87
June 6	Donald McKay .....		August 26 .....	81
June 20	Ben Nevis .....		October 5 .....	108
July 5	Champion of Seas .....		Septem. 26 .....	83
July 20	Shalimar .....		October 15 .....	87
August 5	James Baines.....		October 23 .....	79

*Average, 84½ days.*

HOMeward.

HOMEWARD.			
Sailed.		Arrived.	Days.
April 10	Lightning .....	July 2 .....	83
	Boomerang .....	Septem. 20 .....	105
	Marco Polo .....	October 22 .....	94
	Oliver Lang .....	Novem. 29 .....	99
	White Star .....	Novem. 23 .....	92
	Donald McKay .....	Decem. 29 .....	91
	Ben Nevis .....	Jan. 18 (1856) ...	94
	Champion of Seas .....	January 26 .....	92
	Shalimar .....	February 4 .....	86
	James Baines.....	March 5 .....	98

Average, 93½ days.

### No. III.

*Statement of Declared Value of the Imports of British Goods into the Australian Colonies during the Year 1853.*

With a Comparative Statement of the Imports by other Countries of the same Goods.

[Extracted from a Return made to the House of Commons, May, 1854.]

Colony of Victoria ..... £7,056,334

NOTE.—The Colonists of Victoria give their total Imports for 1853 at £15,842,637, and for the quarter ending 1st April, 1854, at £5,070,381.

Colony of New South Wales ..... 4,527,083  
 " South Australia ..... 1,182,455  
 " Van Diemen's Land ..... 1,408,927  
 " New Zealand..... 230,816  
 " Western Australia ..... 100,917

Total of British Imports ..... £14,506,532

NOTE.—The following are the British Exports to the leading parts of the world, on an average of seven years, 1847—1852, as extracted from *Mac Culloch* (Edition, 1854):—

1. United States.....	£13,055,462	9. Chili and Peru .....	£1,980,285
2. East Indies.....	6,755,831	10. West Indies .....	2,087,725
3. Germany .....	6,388,092	11. China .....	1,787,675
4. Holland .....	3,422,650	12. Russia.....	1,530,056
5. British North America .....	2,936,352	13. Portugal .....	1,037,839
6. Turkey and Greece .....	2,798,597	14. Spain .....	857,532
7. Brazil .....	2,768,125	15. Cape of Good Hope .....	744,638
8. France .....	2,115,296	16. Mexico .....	536,904

### No. IV.

*As to the Enforcement of the Performance of a Mail Service by a System of Pecuniary Penalties alone.*

In one of the strongest cases of neglect and default ever made out, against Mail Contractors, viz., the Royal Australian Mail Company (contractors for the Cape route), the heavy penalties incurred were never enforced. The General Screw Steam Company also, their successors in the same contract, although guilty of several defaults, never paid any penalties.

Penalties at the rate of £30 per diem, were indeed exacted from the owners of the sailing packets established *vid* the Cape in the year 1853, upon the plea that the Royal Australian Mail Company having failed, that route was not adapted for steam navigation.

These penalties, however, were all paid with alacrity; in fact, they constituted no penalty at all, but were merely deductions from the mail money agreed to be paid to each ship. In one case, a shipowner tendered a vessel to perform the passage in seventy-three days, as is believed without much, if any, hope of performing the voyage in that time. The tender was accepted by the Post Office, and the vessel, partly from dull sailing, and partly from overloading, was thirty-seven days over the period contracted for. In this case, the ship received £1,000 mail money, and paid £1,011 penalties, shewing a loss of £11 to the contractor. The sum, therefore, actually paid in this case was a penalty of six shillings and twopence for each day of default: by payment of which large sum the owner was enabled to style his ship "Her Majesty's Royal Contract Mail Packet," and, under cover of that epithet, to earn a large freight by filling her with a full cargo of merchandise and passengers.

With these facts before them, the Committee of the Australian General Association are anxious to impress on their Lordships, that pecuniary penalties in themselves are no guarantee to the public for the performance of a mail contract, while it is clear that the mulcting of a contractor in any sum, however large, is no compensation to the public for the irregular and uncertain transit of their letters.

No. V.

## No. V.

*Comparative Distances of the various Routes to Australia, calculated from Dover to Melbourne.*

(Extracted chiefly from the Distances calculated by the Hydrographer Royal for the Parliamentary Steam Committee, 1831.)

	Miles.	Duration of Passage.	
		D.	H.
The late mail route, <i>vid</i> the Cape ... ..	13,367	80	0
Ditto <i>vid</i> Singapore ... ..	11,521	64	0
The route <i>vid</i> Diego Garcia, recommended by the Association	10,348	44	0
The route projected <i>vid</i> Panama at 10 knots (4 days for stoppages allowed) ... ..	12,686	56	21
Distance from Dover to the Mauritius <i>vid</i> Diego Garcia ... ..	6,987	28	0
Ditto to the Cape ... ..	9,287	38	0
Distance from Melbourne to the Mauritius <i>vid</i> Diego Garcia ... ..	5,653	23	3
Ditto to the Cape ... ..	7,953	32	7
Ditto to Ceylon <i>vid</i> Diego Garcia ... ..	5,416	23	13

## No. VI.

*Diego Garcia.*

The following particulars with regard to this island are extracted from *Horsburg*, by which it will be seen that no place can by nature be better adapted for a coaling station:—

“Diego Garcia, or Great Chagos Island, extends from lat. 7° 13' S. to 7° 26' S., its length from north to south being about fourteen or fifteen miles, and the general breadth from three to four miles, having the form of a crescent, with the convex side to the eastward. This remarkable island may be considered as a steep coral wall standing in the ocean, for the whole interior of the island is a lagoon or natural harbour, nearly of the same length and breadth as the island itself, as there is no part of the circumjacent wall above half a mile broad, and the greater part of the eastern side is only about one-tenth of a mile in breadth. This island, or, rather, contour of an island, is low, generally 8 or 10 feet above the sea at high tides, but inundations of the sea appear to have pervaded the wall in some places, and imparted their waters to those in the harbour. Although low, the island is covered with tall cocoa trees, which make it visible five or six leagues at sea.

“The only safe channel into the harbour is between West Island and the sand projecting from Middle Island, above half a mile to the S.W., leaving a channel near a mile wide between it and West Island, which is safe to approach on the N.W. and N.E. sides. There are no soundings until a ship is close to the entrance; the water then shoals suddenly, from 100 fathoms, no ground, to 20, 10, and 7 fathoms.

“A variety of fish abound in the harbour, and excellent green turtle visit the shores on the outside of the island; the land crabs, which feed on the cocoa nuts as they fall from the trees, are also wholesome food; and good fresh water may be had in almost every part of the island, by digging eight or ten feet deep.

“The S.E. winds prevail here from April to November, but are strongest in June, July, August, and part of September, during which time the current generally sets between W. and N.W. from twelve to twenty miles daily. In March and April, the winds are often very variable and light; October and November are also changeable months, but more unsettled and more squally than the former. In December and January the N.W. winds prevail almost constantly, producing a current to the south-eastward.”

Inquiries instituted by the Association enable them to state that the island is now occupied by some Mauritius houses, who have there establishments for the manufacture of oil from the cocoa nuts growing on the island. The harbour is described by a resident as well sheltered, and the island free from hurricanes. It is also stated that a wharf for the rapid coaling of steamers could be easily constructed. (See the Admiralty Chart of this island left herewith.)

## No. VII.

*Rate of Speed maintainable by Ocean Steamers.*

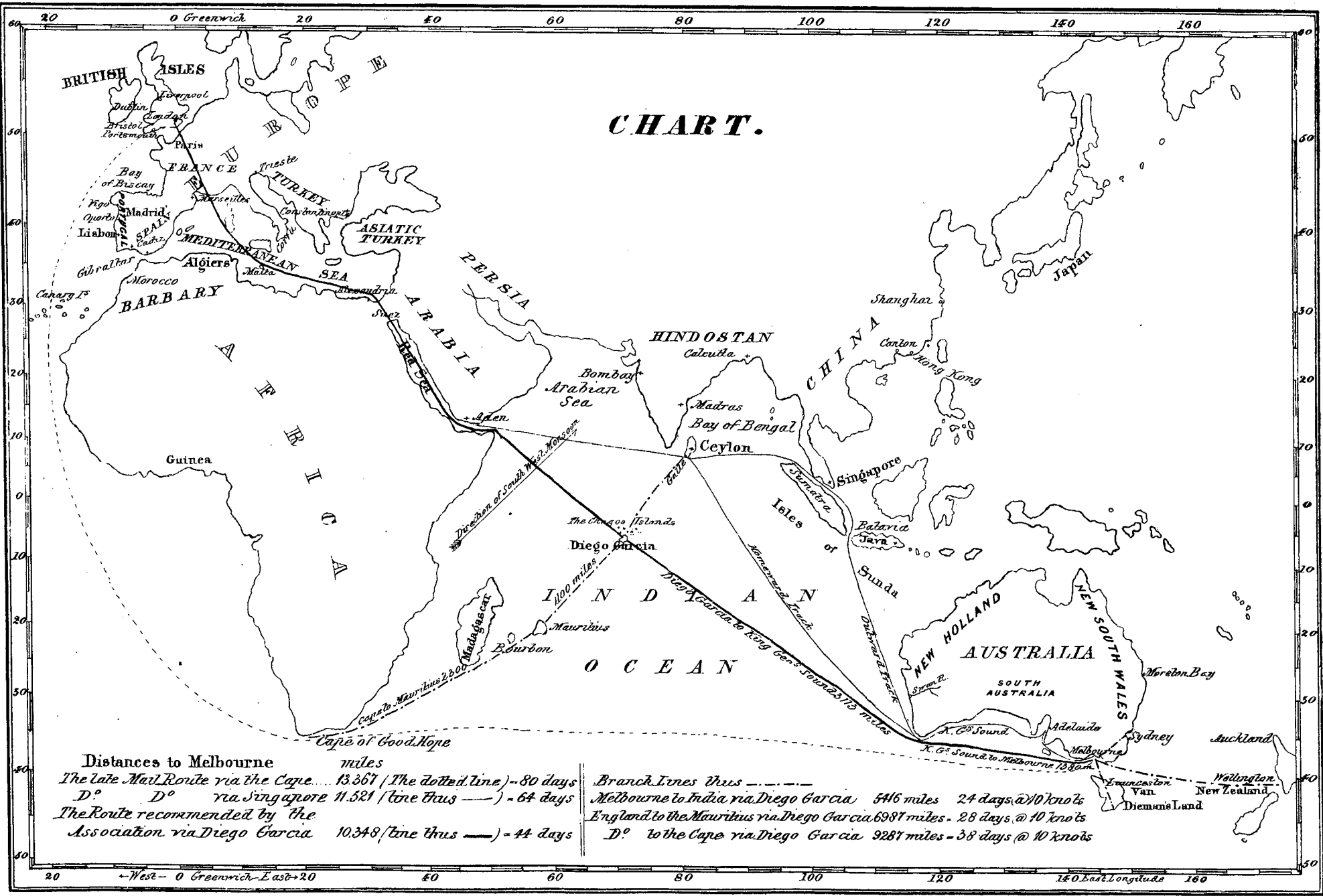
In their memorial, the Association have named 10 knots per hour as the usual Contract Postal Rate; they add, however, in that document, their belief that a much higher speed might with facility be maintained.

It is understood that the passages of the more recently constructed large steam-ships of the Contract Steam Companies would, if analysed and distinguished from the performances of the slower and smaller steamers of ancient construction, shew an average between 11 and 12 knots per hour. It has been stated to the Committee that the “Atrato,” on one voyage from Southampton to St. Thomas, averaged 14 knots, while the “Himalaya” is well known to be capable of equal speed. The “Persia,” also, a ship of 3,400 tons, constructed for Cunard’s Line, averaged also 14½ knots on her recent trial trip. In his evidence before a Parliamentary Committee (Holyhead and Kingstown, 1853, p. 103), Mr. Penn, the highest naval engineering authority in England, asserts the possibility of constructing a vessel to proceed at the rate of twenty-five miles per hour, while Mr. Lloyd, Head of the Steam Department of Her Majesty’s navy, corroborates his statement (p. 104).

Having these facts in view, the Memorialists trust that, in the future contract for the conveyance of the Australian Mails, a higher rate of speed than 10 knots may be stipulated for, in which case they look with confidence to the passage to Australia being brought considerably within 44 days.

## No. VIII.

# CHART.



Distances to Melbourne miles

The late Mail Route via the Cape	13,367 (The dotted line)	- 80 days
D° D° ra Singapore	11,521 (line thus —)	- 64 days
The Route recommended by the Association via Diego Garcia	10,348 (line thus —)	- 44 days

Branch Lines thus

Melbourne to India via Diego Garcia	5416 miles	24 days @ 10 knots
England to the Mauritius via Diego Garcia	6981 miles	- 28 days @ 10 knots
D° to the Cape via Diego Garcia	9281 miles	- 38 days @ 10 knots

## STEAM POSTAL COMMUNICATION-

## No. VIII.

Calculation of the Time required for the Conveyance of the Australian Mails between Dover and Melbourne, at a Speed of Ten Miles per Hour, via the Isthmus of Suez, and the Island of Diego Garcia.

	Miles.	Speed per Hour.	Time.	
			D.	H.
Dover to Marseilles, as follows :—				
Dover to Paris... ..				9
Paris to Marseilles ... ..				19
Stoppage at Paris ... ..				2
Stoppage at Marseilles . . . . .				2
Marseilles to Malta ... ..	799	—	1	7
Stoppage at Malta... ..				
Malta to Alexandria ... ..	650	12	2	7
Alexandria to Cairo, by Rail ... ..	—	—	0	6
Cairo to Suez ... ..	815	10	3	10
Stoppages at Alexandria and Cairo, 12 hours each, and at Suez 8 hours ... ..	207	7½	0	8
Suez to Aden... ..	—	—	1	8
Stoppage at Aden ... ..	1,310	10	5	11
Aden to Diego Garcia ... ..	—	—	0	12
Stoppage at Diego Garcia ... ..	2,074	10	8	15
Diego Garcia to King George's Sound... ..	—	—	0	12
Stoppage there ... ..	3,113	10	12	3
King George's Sound to Melbourne ... ..	—	—	0	12
	1,380	10	5	18
	10,348		42	10
Allowance for accidental delays ... ..			1	14
			44	0

Period for transmission of Mails direct, via Diego Garcia ... ..	D.	H.
Period for transmission of intelligence by Electric Telegraph between England and Australia, via Diego Garcia ... ..	42	10
	41	3

## REMARKS.

The assertion that the passage between Melbourne and London might be effected in forty-three days, has taken many persons by surprise ; in fact, some individuals, accustomed to the present long duration of the voyage, have wholly refused to credit the possibility of such a performance. If, however, it be remembered that the distance in question is not much more than three times that between Liverpool and New York—a passage which has often been performed in ten days—it will be seen that at the same rate of going, the transit to Melbourne might be effected in about thirty-three days. Viewing, also, that one-tenth part of the direct route to Melbourne, that is, upwards of 1000 miles, passes over a line of rail in good working order, it would appear, on reflection, that in lieu of a forty-four days' passage being a wonderful performance, in reality it leaves neither the progress of science or the enterprise of the age much to boast of. At the rate of eleven knots the passage would be performed in thirty-nine days.





1856.

## NEW SOUTH WALES.

# STEAM POSTAL COMMUNICATION.

(CORRESPONDENCE.)

*Ordered by the Legislative Assembly to be Printed, 4 June, 1856.*

## SCHEDULE.

NO.	PAGE.
1. Colonial Secretary, New South Wales, to Chief Secretary, Victoria, intimating that pending some communication from the Secretary of State, this Government did not propose to take any steps for the establishment of the conveyance of Mails by Steam Packets. 4 March, 1856 .. .. .	2
2. Chief Secretary, Victoria, to Colonial Secretary, New South Wales, transmitting Report of a "Select Committee" of the Legislative Council on Steam Postal Communication with England, and copy of a Treasury Minute on same subject. 29 February, 1856 .. .. .	2
3. Despatch from Secretary of State, with copy of Treasury Minute alluded to. 4 December, 1855 .. .. .	10
4. Colonial Secretary, New South Wales, to Chief Secretary, Victoria, on the subject of the arrangement proposed by the Lords of the Treasury for re-establishment of Steam Communication. 8 March, 1856 .. .. .	11
5. Despatch from the Governor General to the Secretary of State, on the same subject. No. 48, 17 March, 1856 .. .. .	12
6. Colonial Secretary, New South Wales, to Chief Secretary, Victoria, in continuation of his letter of the 8th. 26 March, 1856 .. .. .	12
7. Colonial Secretary, New South Wales, to Colonial Secretary, Tasmania, Auckland, Western Australia, and South Australia, requesting the co-operation of those Governments in the proposed postal arrangements. 16 April, 1856 .. .. .	13
8. Colonial Secretary, Tasmania, in reply. 30 April, 1856 .. .. .	14

## STEAM POSTAL COMMUNICATION

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No. 1.

THE COLONIAL SECRETARY, NEW SOUTH WALES, to THE CHIEF SECRETARY, VICTORIA.

*Colonial Secretary's Office,  
Sydney, New South Wales,  
4 March, 1856.*

SIR,

With reference to my letter of the 27th ultimo, in which, in compliance with the request preferred in your communication of the 22nd of last month, I forwarded a Return of Letters, and Newspapers, received by this Colony from, and despatched to, the United Kingdom and the Ports in the Indian Ocean, and China Seas, during the 12 months ended 31st December, 1855, I am now directed by His Excellency the Governor General, to transmit to you a copy of an Act of the Legislature of this Colony, 19 Victoria, No. 29, containing the appropriations made for the promotion of Steam Communication with England *vid* Singapore, in connection with the Steam Mail Packets from that port, and shewing the period for which they have been made, and the conditions which attach to them.

2. I am directed to add, that an offer was made and submitted to the Secretary of State in May last, from Mr. Beit, of Sydney, as Agent for an English Company (the Australian General Investment Association), to establish a Monthly Line of Packets between Sydney and Singapore, by way of Torres Straits, for the sum of £24,000 per annum, and the Postage on Letters. There is, however, reason to believe, from information since received through Mr. Beit, that this offer would not be entertained by the Home Government, but that a Contract for Postal Communication with the Australian Colonies generally would be submitted for public competition; and, until the receipt of some communication on the subject from the Secretary of State, this Government does not therefore propose to take any step for the re-establishment of the conveyance of Mails by Steam Packets.

I have, &c.,

(Signed) E. DEAS THOMSON.

THE HONORABLE  
THE CHIEF SECRETARY,  
&c., &c., &c.,  
VICTORIA.

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No. 2.

THE CHIEF SECRETARY OF VICTORIA to THE COLONIAL SECRETARY OF NEW SOUTH WALES.

*Chief Secretary's Office,  
29 February, 1856.*

SIR,

I have the honor to transmit herewith a copy of the Report of a "Select Committee" of the Legislative Council of Victoria, on Steam Postal Communication, to the third and fourth paragraphs of which, I would invite special attention.

2. The arrangement therein proposed, I would beg of you to submit to His Excellency the Governor General at the earliest opportunity, and if it meets his sanction and approval, that you will lose no time in communicating the result to me.

3.

3. You will observe, that the interests of the other Colonies, as regards this important subject, are not lost sight of in the proposed arrangement, but as it is of extreme importance that an hour shall not be unnecessarily lost in giving it effect, it is considered inexpedient to incur the delay which would arise by waiting for the formal concurrence of their respective Legislatures.

I have, &c.,

THE HONORABLE  
THE COLONIAL SECRETARY,  
&c., &c., &c.,  
NEW SOUTH WALES.

WILLIAM C. HAINES.

[Enclosure 1 in No. 2.]

REPORT OF SELECT COMMITTEE ON STEAM POSTAL COMMUNICATION.

The Select Committee appointed to consider the propriety of immediately establishing a line of steamers between Melbourne and Point de Galle, or Singapore, have agreed to the following Report.

After having examined several witnesses, as to the suitability of Colonial steam vessels for the proposed service, and various other matters relating thereto, your Committee had the satisfaction of having before them the Despatch of the Right Honorable the Secretary of State, dated 4th December, 1855, which was laid on the Table of your Honorable House yesterday.

As this Report embodies a plan for the restoration of steam communication with England, which will secure all the essential requirements, as determined by the Government of Victoria, and your Honorable House, the Committee do not think it necessary to pursue their inquiries further; and your Committee recommend that the plan proposed by the Home Government be definitively approved and adopted.

Considering the large grant for the same object made by the Legislature of New South Wales (£25,000), your Committee recommend that an arrangement be immediately made with the Government of New South Wales, to undertake at once the responsibility of providing, in proportion to their respective appropriations, the Colonial moiety of the cost of establishing this service, without incurring the great delay that must ensue by waiting for the formal concurrence of the Legislatures of Tasmania, South Australia, Western Australia, and New Zealand.

The obvious advantage to those Colonies, as well as ourselves, of speedy action puts their ultimate concurrence beyond doubt. Besides which, it will be in our power to reimburse this Colony by an intercolonial postage until final arrangements are made.

Should, however, the Government of New South Wales not agree, your Committee recommend that it be arranged with the Home Government for Victoria to bear the entire Colonial moiety of the line from England to Melbourne, this Colony having the power to arrange with all the other Colonies for the charge of their mails.

Under any circumstances, your Committee are of opinion that the system of compulsory prepayment, must be made universal.

Although your Committee thus agree in the main points of the proposal of the Home Government, there are some minor subjects which it is desirable to press upon the attention of the Home Government—such as the mail vessels making a longer stay at Melbourne on the homeward route than twenty-four hours, and some arrangement for the conveyance of passengers from Australia without the risk of detention at Point de Galle, should that route be adopted.

And your Committee being aware that two members of your Honorable House (the Honorable the Treasurer and Mr. William Nicholson) are about to proceed to England, recommend that those gentlemen, in conjunction with Mr. W. Rutledge, recently a member of your Honorable House, and who has devoted much attention in England to this subject, be requested to act on behalf of this Colony in treating with the Home Government, and the contractors, in forwarding as much as possible the views expressed in this Report, and the re-establishment, with the least possible delay, of steam communication.

AUGUSTUS F. A. GREEVES,  
Chairman.

[Enclosure 2 in No. 2.]

*COPY DESPATCH with its Enclosures from the Right Honorable the Secretary of State for the Colonies, respecting Steam Postal Communication with the United Kingdom.*

*Laid upon the Council Table by the Treasurer, by command of His Excellency, the Officer Administering the Government, and ordered by the Council to be printed, 27th February, 1856.*

Downing-street,  
4th December, 1855.

SIR,

With reference to previous correspondence, I transmit to you herewith for your information and guidance the copy of a letter from the Secretary to the Board of Treasury, with a minute of their Lordships, dated 27th ultimo, detailing the plan which they propose to adopt for the establishment of Steam Postal Communication between this country

country and Australia, including New Zealand. You will perceive that it is proposed as part of the arrangement, that the entire cost of this service shall be divided equally between the Home Government, and those Colonies collectively; and that each of the Colonies shall contribute to the moiety to be paid by them collectively in proportion to the number of letters despatched by each, to be ascertained every two years. It will, of course, be necessary to obtain in the first place from each of the Colonies named some Act or Resolutions of the Legislature, indicating their readiness to abide by the proposed arrangement, and you will therefore lose no time in bringing the subject, with that view, under the consideration of the Legislature of Victoria, and in reporting the result for the information of Her Majesty's Government.

You will, however, perceive, that as some time must elapse before replies can be received from the different Colonies, and as Her Majesty's Government are anxious that no time should be lost in re-establishing a monthly mail by steam, the Lords Commissioners of the Treasury, relying on the reports which have been received from the Colonies of New South Wales, Victoria, and South Australia, have decided to take immediate steps in order to secure a recommencement of the same at the earliest possible period after the receipt of communications from the different Colonies, expressing their acceptance of these proposals.

I have, &c.

W. LABOUCHERE.

GOVERNOR SIR C. HOTHAM,  
&c., &c.,  
VICTORIA.

[Enclosure 3 in No. 2.]

Treasury Chambers,  
30th November, 1855.

SIR,

With reference to various communications from the Colonial Office, upon the subject of a postal communication by steam between this country and the Australian Colonies, I am commanded by the Lords Commissioners of Her Majesty's Treasury to acquaint you, for the information of Mr. Secretary Labouchere, that the plan which my Lords propose may be thus shortly summed up—

First.—That they shall instruct the Admiralty to obtain tenders, by open competition, for a monthly postal service between this country and Australia, the vessels, outward and homeward, touching at King George's Sound, Melbourne, and Sydney, carrying the mails for the six Colonies of, New South Wales, Victoria, South Australia, Western Australia, Van Diemen's Land, and New Zealand:

Second.—That branch services shall be established by open competition from Melbourne, as the central point, with Port Adelaide, Van Diemen's Land, and New Zealand:

Third.—That all letters and newspapers shall be prepaid, and that each post office shall retain its own receipts:

Fourth.—That the entire cost of the services described, shall be divided equally between the Home Government, and the Colonies collectively:

Fifth.—That each of the Colonies shall contribute to the moiety to be paid by them collectively in proportion to the number of letters despatched by each, to be ascertained every two years.

In the first place it will be necessary to obtain from each of the Colonies named, a duly authorized Legislative acquiescence in the arrangement proposed.

For this purpose I am directed to transmit to you a copy of their Lordships' minute of the 27th instant, and to request that you will move the Secretary of State to take the necessary steps with that view. But I am to state that as some time must elapse before replies can be received from the different Colonies, and as my Lords are anxious that no time should be lost in re-establishing a monthly mail by steam, my Lords, relying upon the correspondence now before them from the Governors of New South Wales, Victoria, and South Australia, have decided to take immediate steps in order to secure a commencement of the service at the earliest possible time after the receipt of communications from the different Colonies, acquiescing in the proposed arrangements.

I am, &c.,  
(Signed)

JAMES WILSON.

HERMAN MERIVALE, ESQUIRE,  
&c., &c., &c.

[Enclosure 4 in No. 2.]

Treasury Minute, dated November 27, 1855.

My Lords have under their consideration various communications from the Colonial Office, giving cover to Despatches from the Colonies of New South Wales, Victoria, and South Australia, and reports from the Postmaster General, upon the subject of a postal Communication between England and the Australian Colonies.

My Lords advert to the arrangement which they sanctioned some time ago for the purpose of securing a monthly postal communication with Australia by steam-boats. By that arrangement a mail was carried, *via* the Cape of Good Hope, by the General Screw Steam Navigation Company, and another by the Peninsular and Oriental Company, *via* Singapore, in every month alternately, so as to secure a monthly communication between the two. The former of these companies having found itself obliged to abandon the contract, and the latter, in consequence of the demand for their vessels for the purposes of the war, having been obliged to suspend the branch service from Singapore to Australia, my Lords deeply

deeply regret that for some months past, so far as steam-vessels are concerned, this important postal service has been interrupted.

As early as the month of February last, with a view of obviating this inconvenience, my Lords requested the Lords of the Admiralty to take steps to obtain a tender for a monthly conveyance of mails to Australia, but it is only within the last few weeks that that tender has been received by the Government; and it is one which, in its present shape, and in the position which the question has now assumed, my Lords are not prepared to accept. This tender, which has been received from the Peninsular and Oriental Company, is to convey a mail by steam, once in every month between Ceylon and the Australian Colonies, in connection with their India mail-boats, for the sum of £84,000 a year. But as the present estimate of the postal revenue with Australia, cannot be computed at more than £36,000, of which £24,000 can only be taken as the portion applicable to the sea service, my Lords would not feel justified in imposing upon the Home Exchequer exclusively, so large a loss (viz., £60,000 a-year,) as would attend the adoption of this tender.

It has been with great satisfaction that my Lords in the meantime have perused the Despatches received from Sir William Denison, Sir Charles Hotham, and Sir R. G. Macdonnell, as well as the proceedings of the respective public authorities of New South Wales, Victoria, and South Australia, upon the subject of postal communication. And my Lords have no doubt that when sufficient time shall have elapsed to enable the replies of the Governors of Van Diemen's Land, Western Australia, and New Zealand, to the Circular Despatch addressed to them by Sir William Denison of the 16th March, inviting their co-operation with the other Colonies, and the mother country, in order to place the postal communication upon a permanent and satisfactory basis, to reach this country, they will be found to coincide with the enlightened and public-spirited views expressed by those Colonies already referred to, in reference to the subject of that Despatch.

The general tendency of all the correspondence upon this subject which has reached this Board, shows that the different Colonies of Australia have become so impressed with the necessity of maintaining a permanent, certain, and rapid postal communication with England, that they are now prepared to share with this country any loss which it may be necessary to incur; but the offers of contribution, though made by those Colonies from which communications have been received in a spirit of earnestness upon which my Lords place the most implicit reliance, are yet either too vague or are accompanied by conditions too contradictory and inconsistent with each other to form at once the basis of an arrangement with regard to which, it is most desirable there should be no possible misunderstanding. It may therefore, be convenient that my Lords should here place on record the various proposals which have been made by the different Colonies, first and last, with respect to sharing in the expense of the postal service, and the conditions attached to those offers:

1. It appears that in 1846 the Legislative Council of New South Wales recommended, that £6,000 a-year for three years should be placed at the disposal of the Home Government, in aid of steam communication *vid* India. In 1852 this recommendation was confirmed, but on condition that the route should be by Torres Straits. In 1852 the Government offered a payment of £6,000 for three years to the first Steam Company which should establish a monthly line of steamers, performing the distance from Sydney to England and back in 120 days.

2. In 1849 the Governor of Van Diemen's Land reported that £2,000 a-year had been appropriated from the local revenue, towards a line from Singapore *vid* Sydney; that is, by the Eastern route through Torres Straits.

3. In 1847 the Legislative Council of South Australia reported in favour of a line by way of the Cape, and promised £3,000 a-year for three years if the passage were accomplished within seventy days.

4. In 1853 the Governor of Western Australia reported that the Council would be willing to pay £1,000 a-year towards the expense of the line from Singapore to Sydney, provided the ships should call at Fremantle.

5. In the same year the authorities of Victoria, in expressing an anxious desire for a cheap postal communication with England, offered to contribute, so far as their own Colony was concerned, for the necessary expenditure; but it afterwards appeared that a misconception had arisen as to the intention of the Colonial authorities in this declaration.

6. In the present year an Act was passed by the Legislature of South Australia, authorising a payment of £500 to each steam-vessel delivering direct mails, *vid* the Red Sea, within fifty-eight days, provided that such vessel had not touched at any port eastward of Adelaide, and that the mails were delivered direct from the same ship that brought them from the last point of land before reaching the Australian Colonies.

7. There remains to be stated the substance of the communications which have taken place between Sir William Denison and the other Governors in the present year. On the 16th of March Sir William Denison addressed the Circular Despatch already adverted to, to Sir Charles Hotham, the Governor of Victoria, and to the Governors of the other Australian Colonies, as well as to the Governor of New Zealand; in which, after dwelling in appropriate terms upon the necessity of restoring, as early as possible, a regular postal communication, he proposes that the whole of those Colonies should join in defraying a portion of the loss which, at least for some time to come, must attend the establishment of a monthly steam communication between them and England; in which circular Sir William Denison divides the subject into the following three points for consideration:—

1st. What should be the maximum sum to be paid for such service?

2nd. In what proportion this amount should be divided between the Colonies, and the mother country?

## STEAM POSTAL COMMUNICATION.

3rd. In what manner the contribution of the Colonies should be apportioned among them?

In discussing these points Sir William Denison assumes that the maximum cost of the service would be £100,000; and he expresses an opinion that of that sum £40,000, or two-fifths of the whole, should be contributed by the Colonies, and the remainder by the Home Government; and that so far as regards the distribution of the contribution among the different Colonies, that should be determined by the proportion of letters which each Colony transmits by the mail, and should be revised annually. The views entertained by Sir William Denison appear to have been entirely adopted by the Executive Council of New South Wales, who passed a resolution that the Legislative Council should be invited to place the sum of £15,000 annually at the disposal of the Government to carry out the arrangement; as yet, however, no information has been received that that has actually been done.

With regard to the Colony of Victoria, my Lords have before them several Despatches of Sir Charles Hotham, addressed to the Secretary of State and to Sir William Denison, by which it appears that the authorities entered warmly into the arrangement proposed; and it appears by Sir C. Hotham's Despatch to Sir William Denison of the fourth of May, that he had caused to be inserted in the "Post Office Act Amendment Bill," a clause pledging the Legislature to the expenditure of a sum not exceeding £50,000 per annum for the maintenance of steam communication between Victoria and Great Britain, not less than once a month, and that the Legislative Council had given its sanction to the Act. But Sir Charles Hotham states that any contribution on the part of Victoria must be subject to the following four conditions:

1st. That no contract should be made that does not provide for the delivery of the mail at Melbourne in a period not exceeding fifty-five days from the date of leaving London, the choice of route to rest with Her Majesty's Government.

2nd. That if the overland route is adopted, the packet must proceed from Point de Galle *via* Cape Lewin and King George's Sound to Melbourne; she must touch at Kangaroo Island, but, to avoid a loss of two or three days, she must not enter Port Adelaide, and that she shall proceed from Melbourne to Sydney.

3rd. That in case the overland route is adopted, the packet would proceed to Sydney immediately after the delivery of the Melbourne mails; but that on her homeward voyage she must remain at least forty-eight hours in the port of Melbourne, exclusive of Sundays.

4th. That preference must be given to the passengers from the Colonies on the homeward route, over any passengers for a shorter distance.

With regard to the Colony of South Australia, my Lords have before them a Despatch of the Governor, Sir R. G. Macdonnell, to the Secretary of State, giving cover to a copy of a Despatch addressed to Mr. Finnis, who administered the Government of the Colony prior to Sir R. G. Macdonnell's arrival, in reply to Sir William Denison's circular letter; the substance of which is, that he had sufficiently ascertained the state of public feeling in the Colony as to be able to say, with some degree of confidence, that the Legislature (which was not then in session) would give its support to any plan arranged by the Home Government, with any steam company, by which an ocean steamer shall monthly call off Port Adelaide, outward and homeward, delivering the mails within the same time as under the late contract with the Peninsular and Oriental Company; remaining in the port only a sufficient time to deliver the mails on the outward voyage, but remaining twenty-four hours on the homeward voyage; that, to secure this advantage the Government would propose to the Legislative Council a Bill, to pay on behalf of the Colony a contribution not exceeding £12,000 a year. In respect to the cost of the whole service, the Acting Governor of South Australia suggests that the Colonies should pay one-half, and the Imperial Government the other.

My Lords have also read with much satisfaction, the enlarged and liberal views taken of the proposal as a whole, in the Minutes of the Executive Council of the 17th of April, as well as in the reports of the Postmaster General of the Colony, of the acting Colonial Secretary, the Advocate General, and the Surveyor General.

Sir R. G. Macdonnell in his Despatch states that the letter of Mr. Finnis represents the views of members of the Legislature, and of the general community, being in favor of steamers from Point de Galle, calling off Port Adelaide.

From the remaining three Colonies, *viz.*, Van Diemen's Land, Western Australia, and New Zealand, as yet no intimation of any reply to Sir William Denison's Despatch has reached this Board.

From this summary of the existing state of these negotiations, it is apparent that they have not yet assumed that clear and tangible position, which would enable the Home Government to make them the basis of an actual arrangement. The Executive Council of New South Wales has passed a resolution to invite the Legislative Council to appropriate a sum of £15,000 towards the service, but no advice has yet been received that this has been adopted. Sir William Denison has stipulated for no conditions which could embarrass the arrangement; but looking to the great preference hitherto shewn and embodied in the Acts of the Legislature for the route by Torres Straits, by which the first arrival and the last departure would be from Sydney, it is possible the Legislature may attach such a condition to any grant it may make. In Victoria the Legislature has authorized a very liberal expenditure for the purpose, but Sir Charles Hotham has attached conditions which are inconsistent with the conditions contended for by South Australia, and, in part, such as it may be impossible to obtain. In South Australia the only Act that has really been passed offers a payment of £500 to every steamer which shall deliver a direct mail *via* Suez, and without first having called at any port eastward of Adelaide; that is, without having first touched at Melbourne. And the Governor now holds out hopes that the Legislative Council would vote £12,000 a-year in aid of a plan by which the mail packets on their outward, and homeward voyages shall call at Port Adelaide. The acquiescence therefore of the Colonies

of

of Victoria and South Australia in the proposal of Sir William Denison, is thus based upon contradictory conditions. With regard to the other three Colonies no engagement, as far as my Lords know, has yet been entered into of any kind.

However, notwithstanding all the difficulties and conflicting views, as exhibited in the various correspondence under consideration, my Lords are of opinion that the interests involved, both Imperial and Colonial, in a speedy restoration of a monthly postal communication between the United Kingdom and the Australian Colonies, are so great, that the time has now arrived when the Home Government should take the initiative, and propose for the adoption of the Colonies some great and comprehensive scheme, which shall upon mature consideration appear the best adapted for the interests of the whole, and pending a communication with the Colonies, in order to save time, to take such preliminary steps as shall secure its coming into operation as soon as possible. And my Lords are the more induced to arrive at this decision for the following reasons:—

1. My Lords cannot, after all the discussions which have taken place upon this subject, be surprised that the different Colonies should view with favour and even insist upon plans which, from the geographical position of the Colonies, promise to confer peculiar advantages upon them, and that in this respect the requirements of some may be at variance with the interests of others or of the whole. And my Lords fear that a great delay would take place, if they were to wait until these differences should be adjusted among the Colonies themselves.

2. My Lords are convinced, from the whole tenor of the correspondence now before them, that all the Colonies are now so much in earnest in their desire to see a permanent steam-postal communication established, that they will be ready to sink any minor differences of opinion, and to submit to slight disadvantages in order to secure the far greater benefits which will result from a well-considered general scheme.

3. My Lords are further induced confidently to believe that each Colony will accept a general plan, prepared by the Home Government after full consideration, in the full conviction that, as it is proposed without any bias or leaning in favor of any one Colony, it may be assumed as that which is the best calculated to meet the public wants.

The principle upon which the postal communication between England and the Australian Colonies has latterly been conducted, is, that a postage of 6d. for a single letter has been charged, of which 4d. was understood to represent the sea rate, 1d. for collecting or delivering a single letter in any part of the United Kingdom, and the same in any part of the Colonies; so that the whole cost of sending a letter from any part of the United Kingdom to any part of the Australian Colonies, or *vice versa*, should not exceed 6d.

As the whole cost of the packet service has hitherto been borne by the Imperial Government, the portion of the postage which represented the sea service has been accounted for to the Home Post Office, so that of the 6d. charged, 5d. has been appropriated to England and 1d. to the Colony receiving or despatching the letter, as the case may be.

My Lords have already adverted to the heavy charge which has hitherto been imposed upon the British Exchequer from the loss which has attended this arrangement, and to the circumstance that they would not feel justified in adopting the still heavier loss which would attend the improved service which the Colonial authorities think absolutely required for their present wants. But this difficulty is happily removed by the enlightened view taken by the Colonial authorities, and their willingness to defray a share of the loss which shall be incurred in securing a regular monthly steam communication. This loss, though it will be great at first, may fairly be expected rapidly to diminish by the increase of the postal revenue, consequent not alone upon an increasing population, but also upon the establishment of a more frequent and regular service. And it may also be hoped that, before many years shall pass, the increased communication may enable contracts for the conveyance of mails, to be made upon considerably more favourable terms.

With a view to effect such an arrangement, there are two modes which might be adopted:

1. The present plan might be continued by which the home authorities defray the whole cost of the sea service; receive the entire sea postage, and might then divide the net annual loss between the Home Government and the different Colonies in proportions to be fixed. Or,

2. It might be arranged, as has been suggested by Sir William Denison, that each Colony should receive the postage of all the letters forwarded by it to the United Kingdom or to either of the other Colonies, and that the Home Post Office should receive the postage upon all letters outward, in which case the entire cost of the sea service would be divided in the proportions determined upon, in place of the balance of loss; but in the adoption of this plan it would be necessary to introduce the system of compulsory prepayment.

It appears to my Lords that the latter plan presents in many respects very important advantages. In the first place, as it may be reckoned that upon an average of the whole year, about the same number of letters are sent to, and received from each Colony, the plan would practically amount to an equal division of the postage between the Colonies and the United Kingdom, while the inter-Colonial postage would go entirely to the Colonies. In the next place the system of intricate accounts, at present subsisting between the Home Post Office and each of the Colonial Offices, in order to show the amounts collected for and due to the former, might be entirely dispensed with. And in the last place, it would leave the Home Government and each Colonial Government free to regulate their rates of postage in any way they thought fit, within the terms of existing Treaties, so far as regards foreign States. It would of course be stipulated that a letter from England should be delivered in any part of each of the Colonies for the payment charged in England, and *vice versa*, that any letter posted in the Colonies should be delivered in any part of the United Kingdom without any additional charge to that made in the Colony. My Lords are therefore prepared to adopt the suggestion made by the Australian authorities on this point, to make prepayment



ment necessary, and that each post office should retain the postage collected by itself as its own proper share of the whole. It will, however, be necessary to make some provision in respect to letters which are posted in the Colonies for Continental, or other foreign countries, and which will pass through the English Post Office. By this arrangement the sum to be divided between the Home Government and the Colonies will be the entire cost of the service, and not the net loss.

My Lords now come to consider the three points raised by Sir William Denison, viz. :—1st. What amount should be expended for the entire service. 2nd. In what proportion that amount should be paid by the Home Government and the Colonies; and 3rd. In what proportion each Colony shall contribute to the share to be paid by the Colonies respectively.

1st. As to the cost of the service. As the only fair and satisfactory means of determining this point, my Lords propose to give instructions to the Admiralty immediately to ascertain by public competition the lowest rate at which it can be accomplished, on the conditions and plans hereinafter defined.

2nd. As to the proportion to be paid by the Home Government on the one hand, and by the Colonies collectively on the other, Sir William Denison suggests that three-fifths should be paid by the Home Government and two-fifths by the Colonies. The Executive Council of South Australia expresses an opinion that, on the arrangement ceasing by which the Home Government receives five-sixths of the postage, which is now proposed as part of the new plan, the cost of the service should be borne equally between the Mother Country and the Colonies collectively. My Lords are of opinion, that there are many sound reasons why this latter course should be adopted, namely, that one-half of the whole cost should be defrayed by the Home Government, and half by the Colonies collectively. In the first place, in making this arrangement, my Lords are desirous above all things that it should be based upon principles that will prove as permanent in their operation as possible, and that will be simple and self-adjusting in the natural changes which must in the course of time take place. It is to be expected that, as the Australian Colonies become more and more developed, the net loss arising from a postal service will become less; but it may be laid down as a principle, that the advantages derived from the conveyance of letters will always be equal to the people at home, and to those of the Colonies, as it is presumed that the same number of letters will be sent and received at each end. This equality of advantages would therefore point to an equal division of the cost. In the next place, as it is proposed that each post office shall retain the prepaid postage upon the whole of its own letters forwarded, and which will practically result in the Colonial Post Offices receiving half of the entire postal revenue attached to the service, it is obviously fair that they should also bear half the cost. And, lastly, it appears to my Lords, that in a mutual arrangement of this kind, which it is essential to place upon a permanent footing, it would not be desirable, even on the part of the Colonies, for the sake of the slight advantage it would confer upon them to adopt a plan which had the characteristic of being in any degree one-sided. On the contrary, it is better for all parties that it should be perfectly fair and just. My Lords therefore propose, that the Home Government shall in the first place defray the entire cost of the main service, and shall be reimbursed by the Colonies to the extent of one-half.

3rd. As to the proportion of the moiety of the cost which shall be contributed by each Colony. It appears to my Lords, that the plan proposed for this purpose by Sir William Denison, and acquiesced in by the authorities of the other Colonies—so far as their views have been expressed—is a perfectly fair and satisfactory one, viz. : that each Colony shall contribute in proportion to the number of letters despatched annually by the steamers. It is proposed that this proportion should be adjusted anew every year; but it appears to my Lords that this would lead to unnecessary trouble, and that if an adjustment took place every two years, it would be sufficiently accurate for all practical purposes.

With regard to the entire cost of the main service, it is necessary to observe, that if upon receiving the tenders which shall be made, it shall be decided to adopt the East Indian route, an addition will have to be made to the amount paid for the service from Point de Galle to the Australian Colonies, as between them, and the Home Government, for the portion of the cost of the existing overland service, which would fairly represent the Australian postage: inasmuch as in an arrangement made between Her Majesty's Government and the East India Company for that service, a portion of the entire cost was calculated to be borne by the former in respect of those Colonies.

My Lords now come to consider the important question of the manner in which the service is to be performed, and the steps to be taken with a view to that end. Great difference of opinion has prevailed as to Panama, or by the Indian overland route, although up to this time experience has shown that the latter is the preferable. My Lords are, however, desirous that a fair test should now be made of all these routes, and they are therefore of opinion that any tenders to be invited should be open to all alike, and that it will be for the Government to consider, and decide, which will be the most advantageous, taken as a whole. At present there is a contract existing with the Peninsular and Oriental Company, for the conveyance of a mail every two months, *via* Singapore, upon terms that may be considered favourable to the Government; that service has been suspended for some time past, in consequence of the vessels of the Company being required for the war, and my Lords have now to decide whether they will hold the Company to the contract, or release them from it. Looking to the circumstance that the new service to be provided for will be monthly, it appears to my Lords that any arrangement for that service which could be made, if it were to work in conjunction with this contract now existing for one-half of it, would be made under great disadvantage, and that the only way by which the best terms and arrangements could be secured, would be to throw the whole open to competition. My Lords are therefore of opinion that the best course will be to relieve the Peninsular and Oriental Company from their

their contract for that portion of the service, and to enter upon the new plan unembarrassed by an existing partial arrangement.

My Lords have already adverted to the conflicting and irreconcilable views taken by the different Colonies as to the mode in which the service should be performed, and as to the route to be taken by the steamers employed; but there are two principles which are so obviously desirable to be observed, that my Lords cannot hesitate to lay them down as a rule which must be for the benefit of the whole: first, that each Colony shall have the benefit of an arrival and departure by each steamer monthly, and that the passage out and home, together, shall be made in the shortest possible time. Upon a very careful examination of the whole subject, and consideration of the correspondence which has taken place, my Lords are of opinion that these objects can be best attained by restricting the points at which the steamers of the main line should call to three, viz., King George's Sound, Melbourne, and Sydney, and that all the other Colonies should be provided with branch services fitting into the arrangements of the main service. My Lords have carefully and especially considered the difference of views upon this subject entertained by the Colonies of Victoria and South Australia. The authorities of the latter Colony very naturally desire that the steamer shall call at Port Adelaide, but when it is considered that vessels of the size which must be employed in this service are unable to cross the bar of the port, and are obliged to bring up at a distance from the port of fifteen miles, and from the land of five miles, and often in very bad weather, and that under any circumstances a small branch steamer must be employed; and when it is further considered that calling at Port Adelaide would cause considerable detention to the more important mails of Melbourne, and Sydney, if the eastern route shall be adopted, as well as a loss of time also on the return voyage, and that therefore the entire voyage out and home would be lengthened, a disadvantage which would affect South Australia as well as the other Colonies, my Lords feel convinced that the inhabitants of that Colony will be satisfied, upon due consideration, that so far as the arrangement above proposed may be a concession on their part, it is one which the general interests of all concerned calls upon them to make, and that they will see that the saving of time in the outward and homeward services together so obtained, will be an advantage to them as well as to others.

My Lords are, however, of opinion that, in the comprehensive scheme which they are now proposing, arrangements should be made at the common cost for the branch services required to convey the mails to and from Port Adelaide, Van Diemen's Land, and New Zealand, making Melbourne the common point of arrival and departure of those branch services. They, therefore, propose that arrangements shall be made on the spot for those services, and that the cost of the same shall be added to the cost of the main services, and divided in the same proportions as already indicated.

My Lords advert to a condition which Sir Charles Hotham attaches to his acquiescence in the proposals of Sir William Denison, namely, that in the event of the overland route being adopted, preference should be given to passengers from the Australian Colonies on the homeward route, over any passengers for a shorter distance. With regard to this condition, my Lords entirely agree with the objection made by Sir William Denison in his Despatch to Sir Charles Hotham of the 18th of April, in which he urges that such a condition might be inconsistent with any arrangements which the Peninsular and Oriental Company could positively make, and that the effect of insisting upon it would be to exclude from the arrangement the advantage of the competition of that Company. Sir Charles Hotham states, as a reason for insisting upon it, the fact that, in the return voyages of the South American steamers, the passengers from the furthest point in the River Plate have the preference over those from Rio de Janeiro; but the circumstances are not the same. The Australian steamers, if that route were adopted, would join the Indian line at Point de Galle, and if that were the extreme point of the Indian service the case would be parallel and the plan possible; but in place of this being so, Point de Galle is a station on the homeward route from Hong Kong, Singapore, and Calcutta, and it would obviously be impracticable to insist upon such a provision in favor of Australian passengers, over those who may have come from those various points.

My Lords are of opinion that, in a purely postal arrangement, conditions in relation to passengers, however important the subject is in itself, should not be permitted to embarrass the more immediate question, and that all parties may rest satisfied that, in this respect, any Company undertaking the service will, for its own interests and profit, make such arrangements as shall be most convenient to all parties.

The plan, therefore, which my Lords propose, may be thus shortly summed up:

1. That they shall instruct the Admiralty to obtain tenders, by open competition, for a monthly postal service between this country and Australia, the vessels, outward and homeward, touching at King George's Sound, Melbourne, and Sydney, carrying the mails for the six Colonies of New South Wales, Victoria, South Australia, Western Australia, Van Diemen's Land, and New Zealand.
2. That branch services shall be established by open competition from Melbourne, as the central point, with Port Adelaide, Van Diemen's Land, and New Zealand.
3. That all letters and newspapers shall be pre-paid, and that each post office shall retain its own receipts.
4. That the entire cost of the service described shall be divided equally between the Home Government and the Colonies collectively.
5. That each of the Colonies shall contribute to the moiety to be paid by them collectively, in proportion to the number of letters despatched by each, to be ascertained every two years.

In the first place, it will be necessary to obtain from each of the Colonies named a duly authorized legislative acquiescence in the arrangement proposed. For this purpose, let a copy of this Minute be transmitted to the Colonial Office, and request that the Secretary

of State will take the necessary steps with that view. But state, that as some time must elapse before replies can be received from the different Colonies, and as my Lords are anxious that no time should be lost in re-establishing a monthly mail by steam, my Lords, relying upon the correspondence now before them from the Governors of New South Wales, Victoria, and South Australia, have decided to take immediate steps in order to secure a commencement of the service at the earliest possible time after receipt of communications, from the different Colonies, acquiescing in the proposed arrangements.

Write to the Secretary of the Admiralty, and request that the Lords Commissioners of the Admiralty will take immediate steps to procure tenders for a monthly postal communication by steam with Australia, on the following conditions, and report to this Board before any contract is actually made :

1. The tenders to be delivered within two months of the date of the advertisement.
2. The tenders to specify the route, and the maximum number of days, between the departure of the mail from Southampton, and its arrival at Melbourne, and Sydney, and King George's Sound, respectively ; and also the number of days on the homeward route.
3. That the service shall be performed under a penalty of £100 a-day for delay in starting, and £30 a-day for any time consumed in the voyage beyond the allowed maximum.
4. The contractors to state in what time from the acceptance of their tender they will be prepared (under a penalty to be agreed upon) to commence the service.
5. The contractors to give such adequate security, as to the Lords of the Admiralty may appear necessary, for the payment of any penalties which may become due, and generally for the performance of the contract ; which penalties in no case whatever shall be relinquished.
6. The contract to be for five years.

Transmit copy of this Minute to the Colonial Office, Admiralty, and Post Office, for their information and guidance.

(Signed)

JAMES WILSON.

No. 3.

THE SECRETARY OF STATE *to* GOVERNOR SIR WILLIAM DENISON.

*Downing-street*

4 December, 1855.

SIR,

With reference to previous correspondence, I transmit to you herewith, for your information and guidance, a copy of a letter from the Secretary to the Board of Treasury, with a Minute of their Lordships, dated the 27th ultimo, detailing the plan which they propose to adopt, for the establishment of a Steam Postal Communication between this country and Australia, including New Zealand.

You will perceive that it is proposed, as part of the arrangement, that the entire cost of this Service shall be divided equally between the Home Government and those Colonies collectively ; and that each of the Colonies shall contribute to the moiety to be paid by them collectively in proportion to the number of letters despatched by each, to be ascertained every two years. It will, of course, be necessary to obtain in the first place, from each of the Colonies named, some Act or Resolutions of the Legislature, indicating their readiness to abide by the proposed arrangement ; and you will, therefore, lose no time in bringing the subject with that view under the consideration of the Legislature of New South Wales, and in reporting the result for the information of Her Majesty's Government.

You will, however, perceive that, as some time must elapse before replies can be received from the different Colonies, and as Her Majesty's Government are anxious that no time should be lost in re-establishing a Monthly Mail by Steam, the Lords Commissioners of the Treasury, relying on the reports which have been received from the Colonies of New South Wales, Victoria, and South Australia, have decided to take immediate steps in order to secure a recommencement of the Service at the earliest possible period after the receipt of communications from the different Colonies, expressing their acceptance of these proposals.

I have, &c.,

(Signed)

H. LABOUCHERE.

GOVERNOR SIR W. DENISON,  
&c., &c., &c.

[Enclosure

[Enclosure in No. 3.]

Treasury Chambers,  
30 November, 1855.

SIR,

With reference to various communications from the Colonial Office, upon the subject of a Postal Communication by Steam between this Country and the Australian Colonies; I am commanded by the Lords Commissioners of Her Majesty's Treasury, to acquaint you, for the information of Mr. Secretary Labouchere, that the plan which my Lords propose may be thus shortly summed up.

First.—That they shall instruct the Admiralty to obtain tenders, by open competition, for a Monthly Postal Service between this Country and Australia, the vessels, outward and homeward, touching at King George's Sound, Melbourne, and Sydney, carrying the Mails for the six Colonies of New South Wales, Victoria, South Australia, Western Australia, Van Diemen's Land, and New Zealand.

Second.—That branch services shall be established, by open competition, from Melbourne, as the central point with Port Adelaide, Van Diemen's Land, and New Zealand.

Third.—That all letters and newspapers shall be prepaid, and that each Post Office shall retain its own receipts.

Fourth.—That the entire cost of the Services described, shall be divided equally between the Home Government and the Colonies collectively.

Fifth.—That each of the Colonies shall contribute to the moiety to be paid by them collectively, in proportion to the number of letters despatched by each, to be ascertained every two years.

In the first place, it will be necessary to obtain from each of the Colonies named a duly authorized Legislative acquiescence in the arrangement proposed.

For this purpose I am directed to transmit to you a copy of their Lordships' Minute of the 27th instant, and to request that you will move the Secretary of State to take the necessary steps with that view. But I am to state, that as some time must elapse before replies can be received from the different Colonies, and as my Lords are anxious that no time should be lost in re-establishing a Monthly Mail by Steam, my Lords, relying upon the correspondence now before them from the Governors of New South Wales, Victoria, and South Australia, have decided to take immediate steps in order to secure a commencement of the service, at the earliest possible time after the receipt of communications from the different Colonies acquiescing in the proposed arrangements.

I am, &c.,  
(Signed) JAMES WILSON.

HERMAN MERIVALE, ESQ.  
&c., &c., &c.

## No. 4.

THE COLONIAL SECRETARY OF NEW SOUTH WALES to THE CHIEF SECRETARY OF VICTORIA.

Colonial Secretary's Office,  
Sydney, 8 March, 1856.

SIR,

I avail myself of the opportunity of the departure of the steamer "Telegraph" for Melbourne this day, to inform you of the anxious desire of this Government to co-operate with that of Victoria, in giving effect to the proposal of the Secretary of State, for the re-establishment of Steam Postal Communication with England, upon the terms set forth in the Treasury Minute of the 27th November, 1855, a Copy of which accompanied the Report of the "Select Committee" of the Legislative Council of Victoria, on the subject enclosed in your letter of the 29th ultimo, and of which a Copy has also been transmitted to the Governor General by the last mail.

2. You will observe by the Act of the Legislature of this Colony of the 19th Victoria, No. 29, a copy of which was enclosed in my letter of the 4th instant, that this Government is empowered to make arrangements for the re-establishment of Steam Communication, with the Governments of the other Australian Colonies, provided the proportion of expense to be borne by New South Wales does not exceed £20,000 per annum, and that the contract does not extend over a longer period than five years. Subject to this limitation, this Government will be quite prepared to join in sharing with the Government of Victoria the responsibility of anticipating the concurrence of the Legislatures of the other Australian Colonies in the general plan determined upon by Her Majesty's Government, so as to prevent, as far as possible, any delay in bringing this most desirable measure into operation at the earliest date practicable.

3. I beg to add that this subject has been brought by the Governor General, under the consideration of His Executive Council, and that a further communication will be made

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to you, as soon as they have terminated their deliberations; but, in the mean time, I am anxious to assure you of the cordial concurrence of this Government, in the recommendation of the "Select Committee" of the Council of Victoria, referred to in your communication above-mentioned.

I have, &c.,  
(Signed) E. DEAS THOMSON.

THE HONORABLE  
THE CHIEF SECRETARY  
OF VICTORIA, MELBOURNE.

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No. 5.

THE GOVERNOR GENERAL to THE SECRETARY OF STATE.

No. 48.

*Government House,  
Sydney, 17 March, 1856.*

SIR,

I have the honor to acknowledge the receipt of your Circular Despatch, dated 10 December, 1855, containing a copy of a letter from the Secretary of the Board of Treasury, embodying the substance of a Minute of the Lords Commissioners upon the subject of Steam Communication with the Australian Colonies, a copy of which Minute was also enclosed.

2. It would appear from these papers that tenders for the conveyance of a Monthly Mail, in accordance with the conditions laid down by the Lords Commissioners of the Treasury, have been already called for, and that the service will be commenced so soon as Her Majesty's Government has obtained from the different Colonies, in the shape of Legislative enactments, their assent to the scheme as proposed.

3. Having laid your Despatch, and its enclosures, before the Executive Council, I have the honor to inform you, that an unanimous opinion was expressed, in favor of the scheme as proposed by the Lords Commissioners of the Treasury, and as by the Act of Council 19 Vict., No. 29, forwarded with my Despatch, No. 192, dated 10 December last, the Governor, with the advice of the Executive Council, has full power to make arrangements with Her Majesty's Imperial Government for the conveyance of Mails by steam from England, to Australia, for a term not exceeding five years, provided that the expense to the Colony shall not exceed £20,000, it is evident that, so far as New South Wales is concerned, the necessary Legislative enactment has already been obtained.

The enclosed correspondence between this Government, and that of Victoria, upon the subject of the proposed arrangements, will show the importance which is attached to the speedy resumption of Steam Communication; and as it is evident that there are ample means at the disposal of the Governments of these two Colonies, to defray the proportion of the cost of the scheme which would be payable by the whole of the Colonies combined, I trust that Her Majesty's Government will accept the guarantee of the Governments of New South Wales and Victoria, for the payment of the Colonial contribution towards the cost of the undertaking, and will *at once* proceed to take the necessary steps to give full effect to the plan detailed in the Minute of the Lords of the Treasury.

I have, &c.,  
(Signed) W. DENISON.

THE RIGHT HONORABLE  
HENRY LABOUCHERE,  
&c., &c., &c.

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No. 6.

COLONIAL SECRETARY OF NEW SOUTH WALES to CHIEF SECRETARY OF VICTORIA.

56-21.

*Colonial Secretary's Office,  
Sydney, 26 March, 1856.*

SIR,

In my letter of the 8th instant I expressed to you the anxious desire of this Government to co-operate with that of Victoria, in giving effect to the proposal of the Secretary of State, for the re-establishment of Steam Postal communication between England  
and

and the Australian Colonies; and intimated my intention of addressing you again on the subject, as soon as the Executive Council of this Colony had terminated their deliberations.

2. The Governor General accordingly directs me now to inform you, that it has been decided by this Government to adopt, in its integrity, the plan proposed in the Treasury Minute of the 27th of November last, alluded to in my former letter, which differs but little from that recommended by the Executive Council of this Colony in 1855; and that with a view to obviate the delay which will ensue before each of the other Colonies, including New Zealand, can give their legislative sanction to the scheme, this Government readily accedes, with one exception, to the proposal contained in your communication of the 29th February, that the Colonies of Victoria and New South Wales, in both of which large appropriations have been voted by anticipation, should become responsible for the payment of one moiety of the entire cost of this service, leaving it, of course, optional with the other Colonies, to give in their adhesion to the arrangement hereafter. The exception alluded to is, that, whereas the Government of Victoria propose, that that Colony and New South Wales, should contribute towards the moiety of the cost, in proportion to the appropriations made by their respective Legislatures, this Government deems it preferable, to adhere in its entirety to the arrangement of the Home Government; that is to say, that each Colony shall contribute in proportion to the number of letters despatched, with the further understanding, that the proportion to be paid by New South Wales shall not exceed the amount actually voted by the Legislative Council, which is £20,000 a year, for the next five years; and not £25,000, as appears to have been supposed at Melbourne.

3. As it is part of the arrangement proposed by the Home Government that Branch services shall be established by open competition, from Melbourne, as the central point with Adelaide, Tasmania, and New Zealand, I am further directed by Sir William Denison, to invite the Government of Victoria to cause Tenders to be called for immediately, by open competition, for the performance of these Branch services, and to apprise me of the result, for His Excellency's information.

4. I beg to add, that the Governor General has reported to the Secretary of State, by the last Mail, the adoption by this Colony of the plan proposed in the Treasury Minute already referred to for the early re-establishment of Steam Postal Communication; and also the arrangement made between the Government of Victoria and New South Wales, for the purpose of giving effect to it without the delay which would be the result of waiting for the concurrence of the adjoining Colonies.

I have, &c.,  
(Signed) W. ELYARD.

THE HONORABLE  
THE CHIEF SECRETARY OF  
VICTORIA.

No. 7.

COLONIAL SECRETARY OF NEW SOUTH WALES to COLONIAL SECRETARY OF TASMANIA.

*Colonial Secretary's Office,  
Sydney, 16 April, 1856.*

SIR,  
I have the honor, by the direction of the Governor General, to transmit for your information the accompanying copies of a correspondence which has taken place with the Melbourne Government, respecting the re-establishment of Steam Communication between England and the Australian Colonies; and to express to you His Excellency's hope, that the Legislature of Tasmania may see fit to concur in the general plans for this purpose, proposed by Her Majesty's Government.

I have, &c.,  
(Signed) E. DEAS THOMSON.

THE HONORABLE  
THE COLONIAL SECRETARY,  
TASMANIA.

A similar communication was addressed to the Governments of South Australia, Western Australia, and New Zealand, respectively.

No. 8.

COLONIAL SECRETARY OF TASMANIA to COLONIAL SECRETARY OF NEW SOUTH WALES.

*Tasmania,*  
*Colonial Secretary's Office,*  
*30 April, 1856.*

SIR,

I do myself the honor to acknowledge the receipt of your letter of the 16th instant, in which, at the instance of the Governor General, you enclose copy of a correspondence that has taken place between the Governments of New South Wales, and Victoria, relative to the re-establishment of Steam Communication, between the Mother Country and these Colonies.

Having laid your communication before Sir Henry Edward Fox Young, I am directed to inform you, that this Government concurs in the propriety of acceding to the proposals of the Lords of the Treasury, in their entirety; and that a recommendation to that effect will be submitted to the Legislature, at its next meeting, when His Excellency has no doubt but that its approval will be obtained.

I have, &c.,  
W. CHAMP.

THE HONORABLE  
THE COLONIAL SECRETARY,  
SYDNEY, NEW SOUTH WALES.

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1856.

## NEW SOUTH WALES.

## CONVEYANCE OF MAILS FROM THE UNITED KINGDOM.

(LETTER FROM SECRETARY TO GENERAL POST OFFICE, LONDON.)

*Ordered by the Legislative Assembly to be Printed, 18 December, 1856.*

THE POSTMASTER GENERAL to THE COLONIAL SECRETARY.

*General Post Office,  
Sydney, 16 December, 1856.*

SIR,

I have the honor to transmit for your information a copy of a letter I have received from the Secretary to the General Post Office, London, relative to the mode by which the Mails from the United Kingdom are to be conveyed after the departure of the Packet conveying the Mails of the 5th October last.

I have, &amp;c.,

THE HONORABLE  
THE COLONIAL SECRETARY.  
&c.,            &c.,            &c.

W. H. CHRISTIE,  
Postmaster General.

THE SECRETARY TO THE GENERAL POST OFFICE, LONDON, to THE POSTMASTER GENERAL,  
SYDNEY, NEW SOUTH WALES.

*General Post Office,  
4 September, 1856.*

SIR,

The European and Australian Royal Mail Company being about to dispatch four of their steam vessels from this country to Australia, to take up the regular Service of the Australian Mails under their Contract with Her Majesty's Government, the Postmaster General intends to avail himself of the departure of these steam vessels for the transmission of the Mails to Australia, instead of sending the Mails by sailing packets, as provisionally arranged; and His Grace has concluded a special contract for this Service with the European and Australian Royal Mail Company.

Notice has accordingly been given to Messrs. James Baines and Co., and to Messrs. Pilkington and Wilson, to terminate their present contracts, and the Service of the Australian Mails by sailing packets from England will cease after the departure of the packet appointed to leave Liverpool on the 5th October next. Thenceforward, and up to the month of January, the Mails for Australia will be despatched from London on the following dates, for conveyance by the European and Australian Company's Packets, from Southampton *via* the Cape of Good Hope, viz. :—

The 18th October,  
12th November,  
12th December, and  
12th January.



## CONVEYANCE OF MAILS FROM UNITED KINGDOM.

The Packets are to proceed direct to Melbourne, and the Contractors are bound to convey, or cause to be conveyed, at their own cost, the Mails for New South Wales from Melbourne to Sydney; and if by other means than the main packet, they are to obtain the written consent of the Postmaster of Melbourne.

The time allowed for the Service, including the delivery of the Mails at Melbourne and Sydney, is 75 days from the date of departure from Southampton.

A Premium of £20 a day will be paid to the Contractors for delivering the Mails within the stipulated time; and, on the other hand, a Penalty of £20 per day will be deducted from their earnings, if the voyage exceed that time.

No fixed subsidy will be paid to the Contractors for this Service, but they will be allowed one-half of the Postage on Letters and Books, and one halfpenny on each Newspaper conveyed, according to the arrangement made in the existing contracts.

I am, &c.,

R. HILL.

THE POSTMASTER GENERAL,

&c., &c., &c.,

Sydney, New South Wales.

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1857.

## NEW SOUTH WALES.

## STEAM POSTAL COMMUNICATION.

(COPY OF CONTRACT WITH EUROPEAN AND AUSTRALIAN R. M. COMPANY.)

*Ordered by the Legislative Assembly to be Printed 17 February, 1857.*

## AUSTRALIAN MAILS.

ARTICLES OF AGREEMENT made the fourteenth day of October, in the year of Our Lord one thousand eight hundred and fifty-six, between John Orr Ewing, of Ratho, Mid Lothian, gentleman; Walter Buchanan, of Shandon, merchant; Allan Gilmour, of Eaglesham, Renfrewshire, gentleman; John Stirling, of Kippendarie, gentleman; John Dunbar, of Holme, merchant; James Galbraith, of Glasgow, merchant; Niel Black, of Dunoon, merchant; John Houldsworth, of Glasgow, merchant; William Connal, of Glasgow, merchant; all in that part of the United Kingdom of Great Britain and Ireland called Scotland: and Thomas Augustus Gibb, of London, merchant; and Robert Smith and John Pender, both of Manchester, in the County Palatine of Lancaster, merchants, Directors of the European and Australian Royal Mail Company (limited), of the one part, and the Commissioners for executing the office of Lord High Admiral of the United Kingdom of Great Britain and Ireland (for and on behalf of Her Majesty) of the other part.

Witness, That the said John Orr Ewing, Walter Buchanan, Allan Gilmour, John Stirling, John Dunbar, James Galbraith, Niel Black, John Houldsworth, William Connal, Thomas Augustus Gibb, Robert Smith, and John Pender, (hereinafter designated as the said Company), in consideration of the payments hereinafter stipulated to be made, do, for and on behalf of the said Company, and separately for themselves, their heirs, executors, and administrators, and each and every of them, doth for himself, his heirs, executors, and administrators, hereby covenant, promise, and agree to and with the said Commissioners, that they, the said Company, shall and will, at their own cost and charge, at all times during the continuance of this Contract, diligently, faithfully, and to the satisfaction of the said Commissioners for the time being, convey Her Majesty's Mails, which shall at any time or times, and from time to time, by the said Commissioners, or Her Majesty's Postmaster General, or any of the officers or agents of the said Commissioners or Her Majesty's Postmaster General, be required to be conveyed monthly each way between Southampton, in England, and Alexandria, in Egypt; and between Suez, in Egypt, and Sydney, in Australia, by means of full power steam vessels (not less than six), supplied with first-rate appropriate steam engines.

That the vessels to be employed in conveying the said Mails between Southampton and Alexandria, shall be of not less than one thousand six hundred tons register, N. M., each, and each be furnished with engines of not less than four hundred horse power, Admiralty measurement, and that the vessels to be employed in conveying the said Mails between Suez and Sydney shall be of not less than two thousand two hundred tons register, N. M., each, and shall each be furnished with engines of not less than five hundred and thirty horse power, Admiralty measurement.

That the said Company shall also provide during the continuance of this Contract, a substantial and efficient steam vessel, or vessels, on board of which the said Company shall and will convey Her Majesty's Mails between Marseilles, in France, and the Island of Malta, in the Mediterranean; and that the said vessel or vessels to be so employed shall be of not less than five hundred tons burthen register, N.M., and to be supplied with first-rate appropriate steam engines, of not less than two hundred horse power, Admiralty measurement.

That all the vessels employed under this Contract shall be always supplied and furnished with all necessary and proper machinery, engines, apparel, furniture, stores, tackle, boats, fuel, oil, tallow, provisions, anchors, cables, fire pumps, and other proper means for extinguishing fire, lightning conductors on Sir Snow Harris's or other approved principle, charts, chronometers, proper nautical instruments, medicines, medicaments, and whatsoever else may be requisite and necessary for equipping the said vessels and rendering them constantly efficient for the service hereby contracted to be performed, and also manned and provided with competent officers, with appropriate certificates granted pursuant to the Act 17 and 18 Victoria, cap. 104, or to the Act or Acts in force for the time being relative to the granting certificates to officers in the merchant service; and also a medical officer to be

Company to convey Mails monthly each way between Southampton and Alexandria, and between Suez and Sydney by full power steam vessels (not less than 6), fitted with first-rate engines.

Vessels employed between Southampton and Alexandria to be of not less than 1,600 tons N.M., each, with engines of not less than 400 horse power; and vessels employed between Suez and Sydney of not less than 2,200 tons N. M., each, with engines of 530 horse power.

Company to provide efficient steam vessels for the Mails between Marseilles and Malta of not less than 500 tons, N.M. with first-rate engine, not less than 200 horse power.

All vessels to be furnished with necessary and proper machinery, &c., with pumps for extinguishing fire, lightning conductors, &c., &c., manned with competent officers, with appropriate certificates granted pursuant to Act 17 and 18 Vict., c. 104, and a medical officer to be approved by said Commissioners, and with a sufficient number of efficient engineers and a

sufficient crew of able seamen, &c., to be approved by said Commissioners.

Company, if required, to submit designs, plans, and sections of vessels to said Commissioners.

Vessels from and to Southampton shall touch at Malta, and vessels from and to Suez shall touch at Point de Galle and Melbourne on outward voyages, and at Melbourne, King George's Sound, and Point de Galle, on homeward voyages, and at Aden on outward and homeward voyages, and at King George's Sound on outward voyage, to coal if necessary, when Mails are to be delivered and received.

One vessel shall, on 18th January, 1857, or such other day of that month as said Commissioners may determine, and once in every succeeding calendar month, on such day and hour as shall be appointed, and immediately after Mails are embarked put to sea from Sydney and proceed to Suez, touching at intermediate ports before referred to, at which Mails are to be delivered and received.

Another of such vessels shall, on the 1st March, 1857, or on such other day as aforesaid, put to sea from Suez and proceed to Sydney, touching at intermediate ports.

On the arrival of Mail at Alexandria from Sydney, Company shall cause same to be embarked on board one of said vessels for Southampton, touching only at Malta.

One vessel shall, on the 14th February, 1857, or other day, and once in every succeeding calendar month after Mails embarked, put to sea from Southampton, and proceed to Alexandria, touching only at Malta.

On arrival of Mail at Suez from United Kingdom, Company shall cause same to be embarked on board one of said vessels, which shall proceed forthwith to Sydney, calling at Point de Galle and Melbourne.

Within what time homeward Mails are to be delivered.

Within what time outward Mails are to be delivered.

approved of by the said Commissioners, and who shall give medical attendance, medicines, and medicaments gratis to all persons, conveyed under or by virtue of this agreement, or whose passage money may be paid for in whole or in part by the public, and with a sufficient number of efficient engineers, and a sufficient crew of able seamen and other men to be in all respects as to vessels, engines, equipments, officers, engineers, and crew, subject in the first instance and from time to time, and at all times afterwards to the approval of the said Commissioners, and of such other persons as shall at any time or times, or from time to time have authority under the said Commissioners to inspect and examine the same, and the said Company shall, if required by the said Commissioners, submit the designs, plans, and sections, of all and every vessel building or to be built, and intended to be employed in the performance of this Contract to the said Commissioners, and be bound to adopt such fittings, scantling, and such dispositions of hatchways as the said Commissioners shall declare in writing to be necessary for carrying such armament as the said Commissioners shall consider suitable and requisite.

That the vessels proceeding from and to Southampton in the performance of this Contract shall touch at Malta, and the vessels from and to Suez shall touch at Point de Galle, in Ceylon, and Melbourne, in Australia, on their outward voyages, and at Melbourne, King George's Sound, and Point de Galle on their homeward voyages, and the vessels may touch at Aden on the outward and homeward voyages, and at King George's Sound on the outward voyage to coal if necessary, and the said Company shall convey in the said vessels to and from, and cause to be delivered and received at each of the ports or places to or at which the said vessels are to, or may proceed or touch, in performance of this Contract, all such of Her Majesty's Mails as shall or are to be delivered or received thereat.

That one of such vessels of not less than two thousand two hundred tons register, N.M., so approved of, and equipped and manned as aforesaid, shall, on the eighteenth day of the month of January, on thousand eight hundred and fifty-seven, or on such other day of that month as the said Commissioners may determine for the first time, and once in every succeeding calendar month, on such day of each month, and at such hour as shall at any time or times, or from time to time, be appointed by the said Commissioners, and immediately after Her Majesty's Mails are embarked, put to sea from Sydney aforesaid, and proceed without loss of time to Suez, touching at, but only at the intermediate ports or places hereinbefore mentioned or referred to, at which Her Majesty's Mails are to be delivered and received, and that one other of such vessels of not less than two thousand two hundred tons register, N.M., so approved of, and equipped and manned as aforesaid, shall, on the first day of the month of March, one thousand eight hundred and fifty-seven, or on such other day of that month as the said Commissioners may determine for the first time, and once in every succeeding calendar month, and at such hour as shall at any time or times, or from time to time, be appointed by the said Commissioners, and immediately after Her Majesty's Mails are embarked put to sea from Suez aforesaid, and proceed without loss of time to Sydney, touching at, but only at the intermediate ports or places as hereinbefore mentioned or referred to, at which Her Majesty's Mails are to be delivered and received.

That on the arrival of every Mail at Alexandria from Sydney, the said Company shall and will without loss of time cause the same to be embarked on board one of the said vessels of not less than one thousand six hundred tons register N.M., and which vessel shall proceed forthwith to Southampton, and there deliver the said Mails, touching only at Malta, as hereinbefore mentioned.

That one other of such vessels of not less than one thousand six hundred tons register N.M., so approved of and equipped, and manned as aforesaid, shall on the fourteenth day of the month of February, one thousand eight hundred and fifty-seven, or on such other day of that month as the said Commissioners may determine for the first time, and once in every succeeding calendar month, on such day of each month, and at such hour as shall at any time or times, or from time to time be appointed by the said Commissioners, and immediately after Her Majesty's Mails are embarked, put to sea from Southampton, and proceed to Alexandria, touching only at Malta, as hereinbefore mentioned.

That on the arrival of every Mail at Suez from the United Kingdom, the said Company shall and will, without loss of time, cause the same to be embarked on board one of the said vessels of not less than two thousand two hundred tons register N.M., and which vessel shall proceed forthwith to Sydney, calling at Point de Galle and Melbourne, as hereinbefore mentioned.

That the said Company shall deliver the homeward Mail at Southampton in one thousand two hundred and twenty-four hours from the hour of its departure from Sydney, exclusive of the time taken for conveying the Mails from the shore at Suez to the shore at Alexandria, when the Mails can and shall be conveyed between the said vessels and the said shores by the said Company, or from their steam vessels at Suez to their steam vessels at Alexandria, where the regulations of the Egyptian Government prohibit the use of the boats of the said Company from conveying the Mails between their vessels and the said shores, and exclusive of any time which the said vessels are hereby authorized to remain at Melbourne, and so that the said Mails shall be conveyed from Sydney to Melbourne in sixty hours, from Melbourne to Suez in eight hundred and sixty-four hours, and from Alexandria to Southampton in three hundred hours, the said Company, however, on the homeward voyage from Sydney to Suez being allowed an additional twenty-four hours for touching at King George's Sound, until such time as lights for the guidance of vessels approaching and navigating King George's Sound shall be fixed and exhibited.

That the said Company shall deliver the Outward Mail at Sydney in one thousand two hundred and ninety-six hours from the hour of its departure from Southampton, exclusive of the time taken for conveying the Mails from the shore at Alexandria to the shore at Suez, or from their steam vessels at Alexandria to their steam vessels at Suez, as the case may be, as hereinbefore specified, and exclusive of any time which the said vessels are

are

STEAM POSTAL COMMUNICATION.

are hereby authorized to remain at Melbourne, and so that the said Mails shall be conveyed from Southampton to Alexandria in three hundred hours, from Suez to Melbourne in nine hundred and thirty-six hours, and from Melbourne to Sydney in sixty hours.

That whenever there shall not be any regulation of the Pasha of Egypt to prevent the said Company from conveying the Mails between their vessels at Alexandria and Suez respectively, and the shore, the said Company shall convey the Mails between such vessels and the shore as at other places where the Mails are to be landed and received under this Contract.

When not prevented by regulation of Pasha, Company to carry Mails between their vessels at Alexandria and Suez and the shore.

That the said vessels between Sydney and Suez, on the outward and homeward voyages, shall stay at Melbourne the authorized time, and in addition thereto, any Sunday, Christmas Day, or Good Friday; should any of the said vessels, whilst employed in the performance of this Contract, be at Melbourne on each or any of those days. And it is hereby agreed, that if the said Company fail, from whatever cause arising, to deliver the Mails at Southampton or Sydney, in the respective periods hereinbefore agreed, then and in such case the said Company shall forfeit and pay to Her Majesty, her heirs and successors, the sum of fifty pounds for the first twenty-four hours, a further sum of one hundred pounds for the second twenty-four hours, a further sum of one hundred and fifty pounds for the third twenty-four hours, and a further sum for every succeeding twenty-four hours, increasing the amount each twenty-four hours fifty pounds; and so on for every twenty-four hours for any time consumed on the respective voyages beyond the number of hours as hereinbefore respectively agreed: Provided always, that the full amount of such penalties, on any one voyage, shall never exceed the sum of seven thousand seven hundred and eight pounds, six shillings, and eight pence; and such penalties shall, in no case whatever, be relinquished: Provided further, And the said Commissioners for and on behalf of Her Majesty, do hereby covenant and agree to pay to the said Company a premium of thirty pounds for each and every twenty-four hours within which the said Mails shall be delivered less the number of hours hereby covenanted for the delivery of the same respectively at Sydney and Southampton. And it is hereby agreed, that weather permitting, the Mails from Geelong are to be brought on deck before reaching Port Philip Heads, and on the mail boat coming alongside, the Mails shall be lowered into it, but in the event of the mail boat not coming alongside before the health officer has left the ship, the vessel is not to be required to wait.

As to stay of vessels at Melbourne.

Penalties for not delivering of Mails within specified times, which are in no case to be relinquished.

When premium to be paid to Company.

As to Mails at Geelong.

And the said Company do hereby further agree with the said Commissioners, that on the arrival of every vessel employed under this Contract at Malta from Alexandria, the said Company shall and will, with all possible despatch, convey Her Majesty's Mails from Malta to Marseilles aforesaid, and there deliver the same, to whom and as the said Commissioners may direct. And further, that the said Company shall and will convey Her Majesty's Mails from Marseilles aforesaid to Malta, from time to time, so as there to meet every steam vessel leaving the United Kingdom under this Contract for Alexandria, and shall deliver the said Mails at Malta accordingly.

As to conveyance of Mails between Marseilles and Malta.

That if they the said Company fail to provide an efficient vessel in accordance with the terms of this Contract, ready to put to sea on the appointed day, and at the appointed hour, at each of the appointed places, then and in such case, and as often as the same shall happen, the said Company shall forfeit and pay unto Her Majesty, her heirs and successors, the sum of one hundred pounds, and also the further sum of one hundred pounds for every successive twenty-four hours which shall elapse until such vessel shall actually proceed to sea on her voyage in the performance of this Contract.

Penalties for not providing efficient vessels ready to put to sea.

That the said Company shall at all times, during the continuance of this Contract, have in constant readiness for the due execution of the service hereby contracted to be performed, vessels equal in tonnage and efficiency to those hereinbefore stipulated to be provided, and shall in every case of any of the said vessels becoming disabled, immediately, at their own cost and charge, replace the same by good and efficient vessels of similar tonnage, obtained by hire or otherwise.

Efficient vessels to be kept in readiness, and Company to replace same when disabled.

That the said Company shall receive and allow to remain on board each of the said vessels so to be and while employed in the performance of this Contract, and also while remaining at each or either of the ports or places for return Mails and with or without Mails in charge an officer in Her Majesty's Navy, to be appointed by the said Commissioners to take charge of the said Mails, and that every such officer shall be recognized and considered by the said Company and their officers, agents, and seamen as the agent of the said Commissioners in charge of Her Majesty's Mails, and as having full authority in all cases to require a due and strict execution of this Contract on the part of the said Company, their officers, servants, and agents, and to determine every question whenever arising, relative to proceeding to sea, or putting into harbour, or to the necessity of stopping to assist any vessel in distress, or to save human life, and that the decision of such officer as aforesaid, shall in each and every such case be final and binding on the said Company, unless the said Commissioners, on appeal by the said Company shall think proper to decide otherwise; but it is understood the above expression "to determine every question," shall not confer upon such officer the power of compulsion in such cases.

Admiralty officer in charge of Mails to be received and conveyed on board vessels.

Such officer to decide all discretionary questions, subject to reversal on appeal to Commissioners.

That if the said Commissioners at any time or times think fit, they shall be at liberty in any case or cases to substitute for the said naval officer an officer in the service of Her Majesty's Postmaster General to have charge of the said Mails, and in such case or cases any such last-mentioned officer shall be received and be allowed to remain on board each of the said vessels as is hereinbefore provided with respect to any such naval officer; but when any officer in the service of Her Majesty's Post Office has the charge of the said Mails his duties shall be confined to Post Office business.

Commissioners may substitute officer from Post Office for naval officer in charge of Mails, but duty to be confined to Post Office business.

That a suitable first-class cabin, with appropriate bed, bedding, and furniture shall, at the cost of the said Company, be provided and appropriated by them for and to the exclusive use and for the sole accommodation of every such naval or other officer, and also a proper and convenient place of deposit on board, with secure lock and key, for Her Majesty's Mails; and

Officer to be provided with first-class cabin, &c., and chief-cabin fare and place of deposit for Mails to be provided.

and that each and every of the said officers shall be victualled by the said Company as a chief cabin passenger, without any charge being made either for his passage or victualling.

Where Mails are to be delivered and received, and Admiralty officer and Mails to be conveyed between vessels and shore.

That Her Majesty's Mails shall be delivered and received at each of the places to which the said vessels are to proceed in the performance of this Contract, and that at each port or place where the said Mails are to be delivered and received the said officer having charge of Her Majesty's Mails shall, whenever and as often as by him deemed practicable or necessary, be conveyed on shore, and also from the shore to the vessel employed for the time being in the performance of this Contract, together with or (if such officer consider requisite for the purposes of this Contract) without Her Majesty's Mails in a suitable and seaworthy boat of not less than four oars, to be furnished with effectual covering for the mail bags, and properly provided, manned, and equipped by the said Company, and that the directions of the said officer shall in all cases be obeyed as to the mode, time, and place of receiving and delivering Her Majesty's Mails.

Admiralty may entrust Mails to masters of vessels, and when master has charge, he is to deliver and receive the Mails to and from the proper parties.

That if the said Commissioners shall, during the continuance of this Contract, or of any part thereof, think fit to intrust the charge and custody of the Mails to the Masters of all or any of the vessels to be employed in the performance of this Contract, and in all cases when the officer or other person appointed by the said Commissioners to have charge of Her Majesty's Mails shall be absent, the Masters of all or any of such vessels shall, without any charge to the public, take due care of, and the said Company shall be responsible for the receipt, safe custody, and delivery of the said Mails, and each of such masters shall make the usual oath or declaration or declarations required, or which may hereafter be required by Her Majesty's Postmaster General, in such and similar cases, and furnish such journals, returns, and information to and as, and perform such services as the said Commissioners or any of their agents may require, and every such Master having the charge of such Mails, shall himself, immediately on the arrival at any of the said ports or places, of any vessel so conveying the same, deliver all Her Majesty's Mails for such port or place, into the hands of the Postmaster of the port or place where such Mails are to be delivered, or into the hands of such other person as the said Commissioners shall direct and authorize to receive the same, receiving in like manner, all the return or other Mails to be forwarded in due course.

Only certain letters to be conveyed.

That the said Company shall not, nor shall any of the Masters of any of the vessels employed or to be employed, under this Contract, receive or permit to be received on board any of the vessels employed under this Contract, any letters for conveyance other than those duly in charge of the said naval officer, or other person authorized to have charge of the said Mails, under or by virtue of this Contract, or which are or may be privileged by law, and the said naval officer or other person, shall report to the said Commissioners any default in this respect, and in case of any such default, the said Company shall be liable to be proceeded against for a breach of this Contract.

Admiralty officer may survey vessels, and Admiralty may survey vessels by other officers

That every naval officer authorized to have the charge of the said Mails, shall either alone or with such other persons as he may consider necessary, have full power and authority as often as he may deem it requisite, to examine and survey in such manner and with the assistance of such persons as he may think proper, any of the vessels employed or to be employed in the performance of this Contract, and the hulls, machinery, equipments, and crew thereof, on his giving reasonable notice in writing, to the Master for the time being of the vessel about to be examined, or to the person acting as such, of such his intention, and if any defect or deficiency be ascertained and notice thereof in writing be given to such Master or person and if the said Master shall not immediately, or as soon as possible, thereupon remedy, replace, or effectively repair or make good every such defect or deficiency, the said Company shall, in every such case, forfeit and pay to Her Majesty, her heirs and successors, the sum of two hundred pounds, but the payment of such penalty shall not in any wise release or discharge the said Company from remedying, replacing, or effectively repairing or making good such deficiency or defect, or from being considered to have committed a breach of this Contract. And that the said Commissioners shall also have full power whenever and as often as they may deem it requisite to survey, by any of their officers or agents, all or every the vessels employed and to be employed in the performance of this Contract, and the hulls thereof, and the engines, machinery, furniture, tackle, apparel stores, equipments, and the officers, engineers, and crew of every such vessel; and the said vessels shall be opened in their hulls whenever the said officers may require, and if any such vessels, or any part thereof, or any engines, machinery, furniture, tackle, apparel, boats, stores, or equipments shall on any such survey be declared by any of such officers or agents unseaworthy, or not adapted to the service hereby contracted to be performed, or if the said Commissioners shall deem it necessary or expedient that any alteration or improvement shall be made therein, or any part thereof; in order to keep pace with the more advanced state of science, every vessel which shall be disapproved of, or in which such deficiency, defect, or want of improvement shall appear, shall be deemed inefficient for any service hereby contracted to be performed, and shall not be employed again in the conveyance of Her Majesty's Mails until such defect or deficiency shall have been repaired or supplied, or the alterations or improvements, as the case may be, shall have been made to the satisfaction of the said Commissioners, and if employed before such defect or deficiency shall have been supplied, or such alterations or improvements, as the case may be, shall have been made to the satisfaction of the said Commissioners, the said Company shall forfeit and pay to Her Majesty, her heirs and successors, the sum of five hundred pounds.

Vessels objected to not to be employed.

That the said Company, and all commanding and other officers of the vessels to be employed in the performance of this Contract, and all agents, seamen, and servants of the said Company shall at all times, during the continuance of this Contract, punctually attend to the orders and directions of the said Commissioners, or of any of their officers or agents as to the landing, delivering, and receiving Her Majesty's Mails.

Company and their officers to attend to directions of Admiralty and their agents, as to the landing, &c., of the Mails.

That

## STEAM POSTAL COMMUNICATION.

That the said Company shall and will, when and as often as in writing they or the masters of their respective vessels shall be required so to do by the said Commissioners, or by such naval or other officer or agents acting under their authority (such writing to specify the rank or description of the person or persons to be conveyed, and the accommodation to be provided for him or them), receive, provide for, victual, and convey to and from and between the places to which any of the vessels are to proceed in the performance of this Contract, on board each and every or any of the vessels to be employed in the performance of this Contract (in addition to the naval or other officer authorized to have charge of the said Mails); any number of naval, military, and civil officers in the service of Her Majesty not exceeding four in any one ship, with or without their wives and children, as chief cabin passengers; and any number of non-commissioned and warrant officers or civilians in Her Majesty's service not exceeding two in any one ship, with or without their wives and children, as fore cabin passengers, together with the servants of both chief and fore cabin passengers, and any number of seamen, marines, soldiers, or artificers in Her Majesty's service not exceeding ten in any one ship, with or without their wives and children, as deck passengers; to be always provided with effectual protection from rain, sun, and bad weather, and not exposed on deck without such competent shelter, a fortnight's notice being given, if practicable, to the said Company or to their agent at the port of embarkation, and all such passengers shall be permitted to ship the quantity of baggage allowed by the said Company to ordinary passengers of similar rank, free of all charge for the conveyance of the same.

Certain number of officers, and others in the service of Her Majesty, to be conveyed, with or without their wives and children, and servants, and those who are deck passengers to be effectually protected from the weather.

That commissioned officers, their wives and children, shall be considered as chief cabin passengers; non-commissioned officers and warrant officers, their wives and children, as fore cabin passengers; and seamen, marines, private soldiers, artificers, and their wives and children, as deck passengers; and the said servants (in respect of accommodation) as the servants of chief cabin passengers.

As to what class of passengers such officers, &c., are to be considered.

That the victualling of officers, their wives and children, conveyed as chief cabin passengers, shall be the same as is usually allowed by the said Company to chief cabin passengers, their wives and children; the victualling of non-commissioned officers, their wives and children, conveyed as fore cabin passengers, shall be the same as is allowed to the boatswain and carpenter of the said Company's steam ships; and the victualling of seamen, marines, soldiers, and artificers, their wives and children, conveyed as deck passengers, shall be the same as is allowed to the seamen of the said Company's steam ships; and the victualling of the servants of officers, whether chief or fore cabin passengers, shall be the same as the servants of other chief or fore cabin passengers.

As to their victualling.

That the passage money shall be paid in full of all charge for mess, including a pint of port or good foreign white wine, and one bottle of malt liquor per day for each officer conveyed as a chief cabin passenger, and half a gill of spirits per day, or an equivalent, if not issued for each warrant officer, non-commissioned officer, seaman, marine, soldier, artificer, and servant, conveyed as a fore cabin or a deck passenger, at and after the rates charged by the said Company for ordinary passengers of a similar description, the said Company carrying children under three years of age free, and charging for male servants one half and for female servants two-thirds of the rates charged for their employers.

As to their passage money, and what the same is to include.

That the payment for the passage ordered at the expense of the public for any person shall only be made on the production of the order for the passage and of a certificate from the person in the following form, namely:—

Certificate to be produced.

I hereby certify, that on the \_\_\_\_\_ embarked at \_\_\_\_\_ as a \_\_\_\_\_ passenger on board the Mail Steam Packet \_\_\_\_\_ for a passage to \_\_\_\_\_ and landed at \_\_\_\_\_ on the \_\_\_\_\_

To this certificate the following addition is to be made in every case of a male cabin passenger, namely:—

"I further certify, that the first dinner meal taken on board was on the \_\_\_\_\_ and the last dinner meal on the \_\_\_\_\_

"Dated this \_\_\_\_\_ day of \_\_\_\_\_  
And the correctness of the dates must be corroborated by the Master of the packet and by the signature of the passenger underneath.

"The dates inserted in this certificate are correct.  
\_\_\_\_\_  
(Signature.)  
\_\_\_\_\_  
Master of the Packet.

\_\_\_\_\_  
(Signature.)  
\_\_\_\_\_  
Passenger."

That the passage money for the families and wives of officers shall be paid to the said Company by the officers themselves, at the rates charged for ordinary passengers of a similar description; their children under three years of age being conveyed free of charge.

Officers to pay passage money for their families and wives.

That the passengers hereinbefore mentioned or referred to are to be exclusive of any men to be sent home under the provisions of the Act 17 and 18 Victoria, cap. 104, the rate of passage, for whom is to be, and to be paid for in accordance with the provisions of that Act.

Such passengers to be exclusively of distressed seamen, &c.

That whenever the said Company shall convey any soldiers or deck passengers other than those specially provided for by this Contract, the said Company shall provide them with adequate protection from rain, sun, and bad weather; and they shall not be exposed on deck without such competent shelter.

When soldiers or deck passengers are conveyed other than those before provided for, they are to be protected from bad weather.

That all and every the sums of money hereby stipulated to be forfeited and paid by the said Company unto Her Majesty, her heirs and successors, shall be considered as stipulated or ascertained damages; and shall and may be deducted and retained by the said Commissioners out of any monies payable, or which may thereafter be payable, to the said Company; or the payment may be enforced as a debt due to Her Majesty, with full costs of suit, at the discretion of the said Commissioners.

Stipulated damages.

Certain packages are to be conveyed by Company, and also naval and other stores, not exceeding ten tons in weight.

As to the employment of exceptional vessels.

If stoppage of Mail to visit through Egypt.

As to alteration of times of departure and arrival of Mails by Admiralty.

Payment to Company.

That the said Company shall and will receive on board each and every of the said vessels employed in the performance of this Contract, any number of small packages containing astronomical instruments, charts, wearing apparel, medicines, or other articles, and convey and deliver the same to, from, and between all or any of the said ports or places to or from which the said Mails are to be conveyed, in the performance of this Contract, when and as often as directed by the said Commissioners or their agents, or by the British naval officer in command of the station, or at any port where the vessel may touch, free from all costs and charges; and also shall and will receive on board each and every of the said vessels, and convey and deliver to, from, and between all or any of the said ports or places any naval or other stores not exceeding ten tons in weight, at any one time in any one vessel, at the rate of freight charged by the said Company for private goods, on receiving from the said Commissioners, or any of their officers or agents, two days' previous notice of its being their intention to have such stores so conveyed; and that the said Company shall in all cases be strictly responsible for the due custody and safe delivery of the said packages, articles, and stores: Provided always, and it is hereby agreed, that notwithstanding anything herein contained it shall be lawful for the said Company to convey the Mails between Southampton and Alexandria in vessels chartered by the said Company, and approved of by the said Commissioners, until the said steam vessels of the said Company of not less than one thousand six hundred tons are ready; which last mentioned vessels the said Company hereby agrees shall be ready and shall perform the said service as soon as practicable. And it shall also be lawful for the said Company to convey the Mails from Suez to Sydney three times in the year one thousand eight hundred and fifty-seven; and from Sydney to Suez three times in the year one thousand eight hundred and fifty-seven, but on no other occasions, in vessels of not less than one thousand eight hundred tons new measurement, and being full power steamers, touching on each of the voyages at Point de Galle and Melbourne on the outward passage, and at Melbourne, King George's Sound and Point de Galle on the homeward passage; and with regard to such six exceptional voyages, if the same shall have been performed to the satisfaction of the said Commissioners, such allowance shall be made for extra time for the same as the said Commissioners shall in their discretion think fit. And it is hereby agreed, that all clauses, penalties, stipulations, and conditions contained in this Agreement shall, as far as practicable, be made applicable to and shall apply to such last mentioned vessels, and also to any such chartered vessels as aforesaid, and to the voyages performed by them respectively, and to the said Company in respect thereof. And it is hereby agreed, that in the event of an entire stoppage of Her Majesty's Mails through Egypt the circumstances shall be investigated by the said Commissioners, in order that the said Commissioners may come to such determination as in their opinion the circumstances of the case may require.

That if at any time or times during the continuance of this Contract, the said Commissioners shall deem it requisite to alter the particular days, times, and hours of departure from, and arrival at, any of the ports or places to or from which Her Majesty's Mails are to be conveyed under or by virtue of this Contract they shall be at liberty at any time or times, or from time to time to alter the days and hours of departure and arrival, on giving notice in writing of such their intention to the said Company, but so that such alteration be so arranged as not to involve the necessity of employing a greater number of vessels than were or ought to have been employed under this Contract, previously to any such alteration, and any such notice if applicable to vessels employed on the western side of the Isthmus of Suez, to be a three calendar months' notice, and if applicable to vessels proceeding from Sydney or other ports on the eastern side of such Isthmus, such notice to be a six calendar months' notice, and the particular days, times, and hours of departure from and arrival at such ports or places which may be appointed by any such alteration in force for the time being, shall be deemed to be the days, times, and hours of departure and arrival of Her Majesty's Mails under this Contract, and shall be observed and kept by the said Company accordingly.

And in consideration of the due and faithful performance by the said Company of all the services hereby contracted to be by them performed, the said Commissioners do hereby agree that there shall be paid to the said Company so long as they perform the whole of the said services in the manner and with such vessels as herein provided, by bills payable seven days from and after the respective dates thereof, by Her Majesty's Paymaster-General, a sum after the rate of ONE HUNDRED AND EIGHTY-FIVE THOUSAND POUNDS per annum, a proportionate part of such sum to be paid on the completion of each entire voyage, each performance of the postal service hereinbefore covenanted, to be performed between Sydney and the United Kingdom, and between Malta and Marseilles, or between the United Kingdom and Sydney, and between Marseilles and Malta, being deemed an entire voyage; and on the production by the said Company from time to time to the Accountant-General of the Navy of three certificates that the service has been duly performed, that is, one certificate from each of the three officers severally having charge of the said Mails in the following form, payment is to be made accordingly, subject to any abatement on account of penalties or other sums which may be payable by the said Company, and with the proper addition if any premium has been acquired.

#### FORM OF THE SAID CERTIFICATE.

"I hereby certify to the Lords Commissioners of the Admiralty, that H. M. Mails were embarked and received into my charge, on board  
 on the \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_ A.M. or P.M.,  
 at \_\_\_\_\_ and were landed at \_\_\_\_\_ on the \_\_\_\_\_  
 day of \_\_\_\_\_ at \_\_\_\_\_ A.M. or P.M."

Provided

Provided always that a deduction after the rate of one thousand five hundred pounds per annum shall be made from the said annual payment of one hundred and eighty-five thousand pounds, in case and so long as or while no accommodation shall be required by the said Commissioners, for a naval or other officer of Her Majesty in charge of the Mails: And it is hereby agreed that the said Commissioners for executing the Office of Lord High Admiral, shall at any time during the continuance of this Contract, if they shall consider it necessary for the public interest, have power and be at liberty to purchase all or any of the said vessels of the said Company at a valuation, or to charter the same exclusively for Her Majesty's service, at a rate of hire to be mutually fixed and agreed on by them and the said Company; but if any difference should at any time or times arise as to the amount of valuation or hire so to be paid, such difference shall be referred to two arbitrators, one to be chosen from time to time by the said Commissioners, and the other by the said Company, and if such arbitrators shall at any time or times not agree in the matter or question referred to them, then such question in difference shall be referred by them to an umpire, to be chosen by such arbitrators before they proceed with the reference to them, and the joint and concurrent award of the said arbitrators, or the separate award of the said umpire, when the said arbitrators cannot agree, shall be binding and conclusive upon all parties, and that the said Commissioners, in the case of hiring any such vessel, shall return the same to the said Company in the same state and condition as she was in at the time of any such hiring, reasonable wear and tear excepted, and if any difference should arise upon that point, the same shall be settled in the same manner as the amount for the hiring is to be settled in case of difference. And it is further agreed that in case of such purchase or hire, the service hereby contracted to be performed shall be performed by other vessels of the Company of a similar description to the vessels or vessel purchased or hired, if they can in due and proper time furnish them such other vessels as to construction, machinery, equipment and crew, to be subject to the same approval as other vessels employed under this Contract. And it is agreed that any submission which may be made to arbitration in pursuance of this Contract shall be made a Rule of Her Majesty's Court of Exchequer, pursuant to the statute in that case made and provided, and that any witnesses examined upon reference may be examined upon oath. And it is hereby agreed, that the whole postage of all mails, despatches, and letters of every description conveyed in the vessels employed under this Contract, whether carried from or out of Her Majesty's dominions or otherwise, shall belong to Her Majesty and shall be at the disposal of Her Majesty's Postmaster-General. And it is hereby agreed and declared, that this Contract shall commence on the day of the date hereof, and shall continue in force for five years from the day on which the first vessel shall commence her voyage from Sydney, in the performance of this Contract, and at the expiration of such five years this Contract shall determine accordingly, but not so as to prevent either of the said parties hereto availing themselves of this Contract for recovering any sum of money or damages, should there have been any breach of this Contract previously to the determination of the same. And it is hereby distinctly understood, that the said Company shall undertake for themselves all arrangements relative to quarantine, as connected with the due and regular performance of the conditions of this Contract. And it is hereby further agreed and provided, that without the consent of the said Commissioners, signified in writing, under the hand of one of their secretaries, neither this Contract nor any part thereof, shall be assigned, underlet, or disposed of, and that in case of the same or any part thereof being assigned, underlet, or otherwise disposed of, without such consent, signified as aforesaid, or in case of breach of this Contract on the part of the said Company, either by habitual negligence or wilful default, it shall be lawful for the said Commissioners for executing the said Office of Lord High Admiral (if they think fit, and notwithstanding there may or may not have been any former breach of this Contract) by writing under the hand of one of their secretaries for the time being, to determine this Contract, without any previous notice to the said Company or their agents, nor shall the said Company be entitled to any compensation in consequence of such determination, but if even this Contract be so determined, the payment of the sum of money hereinafter agreed to be made shall be enforced should the same be not duly paid by the said Company, and the said Company shall continue liable for any liability which they may have incurred previous to any such determination. And it is also agreed that the notices or directions which the same Commissioners or their secretary, officers, or other persons are hereby authorized and empowered to give to the said Company, their officers, servants, or agents may, at the option of such Commissioners or their secretary, officers, or other persons be either delivered to the master of any of the said vessels, or other officer or agent of the said Company in charge or management of any vessel employed in the performance of this Contract, or may be left for the said Company at their office or house of business in Glasgow, or at their or any of their last known places of business or abode, and any notices or directions so given or left shall be binding on the said Company. And in pursuance of the directions contained in a certain Act of Parliament made and passed in the 22nd year of the reign of King George 3rd, entitled "An Act for restraining any person concerned in any contract, commission, or agreement made for the public service from being elected or sitting and voting as a member of the House of Commons." It is hereby expressly declared and agreed and these Presents are upon this express condition, that no member of the House of Commons is or shall be admitted to any share or part of this agreement, or to any benefit to arise therefrom. And it is hereby agreed that if, when this Contract terminates, any vessels or vessel should have started or should start with the Mails, in conformity or in intended conformity with this Contract, such voyage or voyages shall be continued and performed, and the Mails be delivered and received during the same, as if this Contract remained in force with regard to any such vessels and services, but the said Company shall not be entitled to any payment or compensation for the same. And lastly, for the due and faithful performance of all and singular the covenants, conditions, provisoes, clauses, articles, and agreements hereinbefore contained, which on the part and behalf of the said Company are or ought to be observed,

As to deduction therefrom when no accommodation for officer in charge of Mails.

Admiralty may purchase or charter vessels.

Commencement and duration of Contract.

Company to make arrangements as to quarantine.

Contract not to be assigned, &c., without Admiralty consent.

In case of breach, Admiralty may determine Contract when breach is either from habitual negligence or wilful default.

As to service of notices.

No Member of Parliament to share in Contract.

As to vessels which have started, or might start, when Contract has terminated.

Company to pay twenty-five thousand pounds in case of breach.



observed, performed, fulfilled, and kept, the said Company do hereby bind themselves and their successors unto our Sovereign Lady the Queen, in the sum of twenty-five thousand pounds of lawful money of the United Kingdom, to be paid to our said Lady the Queen, her heirs and successors, by way of stipulated or ascertained damages hereby agreed upon between the same Commissioners and the said Company in case of the failure on the part of the said Company, in the due execution of this Contract or any part thereof.

In witness whereof the said parties to the presents have hereunto set their hands and seals the day and year first above written.

Signed, sealed, and delivered (being first duly stamped) by the said Walter Buchanan, Allan Gilmour, John Stirling, and William Connal, in the presence of

FREDERICK TREVOR,  
Collector of Customs at Glasgow.

Signed, sealed, and delivered by the said John Dunbar, in the presence of

SARAH A. FALCONER,  
Postmistress, Croy-Ardsier.

Signed, sealed, and delivered by the said John Orr Ewing, James Galbraith, John Houldsworth, Thomas Augustus Gibb, Robert Smith, and John Pender, in the presence of

ANTONIO BRADY.

Signed, sealed, and delivered by the said Niel Black, and the said Commissioners, in the presence of

JOHN DOUTTY.

JOHN ORR EWING (L.S.)  
WALTER BUCHANAN (L.S.)  
ALLAN GILMOUR (L.S.)  
JOHN STIRLING (L.S.)  
JOHN DUNBAR (L.S.)  
JAMES GALBRAITH (L.S.)  
NIEL BLACK (L.S.)  
JOHN HOULDSWORTH (L.S.)  
WILLIAM CONNAL (L.S.)  
T. A. GIBB (L.S.)  
R. SMITH (L.S.)  
JOHN PENDER (L.S.)  
PETER RICHARDS (L.S.)  
ALEX. MILNE (L.S.)

## TIME TABLE.

### MAILS BETWEEN ENGLAND AND AUSTRALIA.

#### OUTWARDS.

		1857.												1858.
		FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.	
SOUTHAMPTON	DEPARTURE	February 24, Noon.	March 12, Noon.	April 12, Noon.	May 12, Noon.	June 12, Noon.	July 12, Noon.	August 12, Noon.	September 12, Noon.	October 12, Noon.	November 12, Noon.	December 12, Noon.	January 12, Noon.	
LONDON, <i>via</i> Marseilles...	DEPARTURE	March 2, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	" 18, Evening.	
ALEXANDRIA	ARRIVAL	" 8, Midnight.	" 24, Midnight.	April 24, Midnight.	May 24, Midnight.	June 24, Midnight.	July 24, Midnight.	August 24, Midnight.	September 24, Midnight.	October 24, Midnight.	November 24, Midnight.	December 24, Midnight.	January 24, Midnight.	
SUEZ	DEPARTURE	" 11, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	" 27, Noon.	
MELBOURNE	ARRIVAL	April 19, Noon.	May 5, Noon.	June 5, Noon.	July 5, Noon.	August 5, Noon.	September 4, Noon.	October 5, Noon.	November 5, Noon.	December 5, Noon.	January 5, Noon.	February 4, Noon.	March 7, Noon.	
	STAY	One day.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day and a half.	One day.	
	DEPARTURE	April 20, Noon.	May 6, Midnight.	June 6, Midnight.	July 6, Midnight.	August 6, Midnight.	September 5, Midnight.	October 6, Midnight.	November 6, Midnight.	December 6, Midnight.	January 6, Midnight.	February 5, Midnight.	March 8, Noon.	
SYDNEY	ARRIVAL	" 22, Midnight.	" 9, Noon.	" 9, Noon.	" 9, Noon.	" 9, Noon.	" 8, Noon.	" 9, Noon.	" 9, Noon.	" 9, Noon.	" 9, Noon.	" 8, Noon.	" 10, Midnight.	
	INTERVAL FOR REPLIES.	12 hours.	48 hours.	48 hours.	48 hours.	48 hours.	72 hours.	48 hours.	48 hours.	48 hours.	48 hours.	72 hours.	12 hours.	

#### HOMEWARDS.

		1857.										1858.		
		APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.	FEBRUARY.	MARCH.	
SYDNEY	DEPARTURE	April 11, Noon.	May 11, Noon.	June 11, Noon.	July 11, Noon.	August 11, Noon.	September 11, Noon.	October 11, Noon.	November 11, Noon.	December 11, Noon.	January 11, Noon.	February 11, Noon.	March 11, Noon.	
MELBOURNE	ARRIVAL	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	" 13, Midnight.	
	STAY	Two days.	Two days.	Two days.	Two days.	Two days.	Two days.	Two days.	Two days.	Two days.	Two days.	One day.	Two days.	
	DEPARTURE	April 15, Midnight.	May 15, Midnight.	June 15, Midnight.	July 15, Midnight.	August 15, Midnight.	September 15, Midnight.	October 15, Midnight.	November 15, Midnight.	December 15, Midnight.	January 15, Midnight.	February 14, Midnight.	March 16, Midnight.	
SUEZ	ARRIVAL	May 21, Midnight.	June 20, Midnight.	July 21, Midnight.	August 20, Midnight.	September 20, Midnight.	October 21, Midnight.	November 20, Midnight.	December 21, Midnight.	January 20, Midnight.	February 20, Midnight.	March 22, Midnight.	April 20, Midnight.	
ALEXANDRIA	DEPARTURE	" 24, Noon.	" 23, Noon.	" 24, Noon.	" 24, Noon.	" 23, Noon.	" 24, Noon.	" 23, Noon.	" 24, Noon.	" 23, Noon.	" 23, Noon.	" 23, Noon.	" 23, Noon.	
LONDON, <i>via</i> Marseilles...	ARRIVAL	" 30, Noon.	" 29, Noon.	" 30, Noon.	" 29, Noon.	" 29, Noon.	" 30, Noon.	" 29, Noon.	" 30, Noon.	" 29, Noon.	March 1, Noon.	" 31, Noon.	" 29, Noon.	
SOUTHAMPTON	ARRIVAL	June 5, Midnight.	July 5, Midnight.	August 5, Midnight.	September 4, Midnight.	October 5, Midnight.	November 5, Midnight.	December 5, Midnight.	January 5, Midnight.	February 4, Midnight.	March 7, Midnight.	April 6, Midnight.	May 5, Midnight.	



1856.

NEW SOUTH WALES.

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## STEAM POSTAL COMMUNICATION.

(LETTER FROM MESSRS. BEIT &amp; SONS.)

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*Ordered by the Legislative Assembly to be Printed, 5 August, 1856.*

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Sydney, 11 July, 1856.

SIR,

With your Excellency's kind permission, we have the honor again to submit the proposal for re-establishing a Monthly Mail Communication between this Colony and England, *vid* Singapore, modified in accordance to the views your Excellency expressed on the former occasion, as regards the remuneration to the Company, and, at the suggestion of the Company, increasing the tonnage and power of the boats to be employed.

The Directors have furnished us now with full power of attorney, &c., &c., to make a binding Contract, on their behalf, with this Government; and they will be prepared to begin the service within a very short period, (to be stipulated,) after receipt of a concluded Contract.

We take this opportunity of bringing under your Excellency's consideration, first—the peculiar and important advantages which this route offers for New South Wales; secondly, a plan conferring upon all the Australian Colonies the greatest benefits obtainable, to which they are respectively entitled by their importance and geographical position, without favoring the interests of one at the expense of another; and, lastly, the actual position of this Postal Communication with the Imperial Government, and the probability of its ready concurrence in the scheme now proposed.

1. For New South Wales it is of the utmost importance that the Torres Straits route should be adopted, in preference to any other, even if the Mails could be brought within the same time, or even one or two days quicker, by the latter, on account of the importance of bringing the Northern part of Australia in direct communication with the Indian Archipelago and China; from whence a laboring population for the tropical portion of Australia must be obtained, and with which a beneficial commercial intercourse would rapidly be established, as soon as a settlement can be formed at Port Albany, or its neighbourhood.

2. The superiority of the navigation *for steamboats* has been so fully established, by repeated reports of Sir J. Beaufort, the late Admiral King, Captain Stokes, and others, that it may be justly supposed that passengers from all India and China intending to visit Sydney, will prefer to come by this, generally, smooth-water passage, than to go by the western route *vid* Cape Leuwin and Melbourne.

3. This route can be established with the least delay, and at the smallest expense, being the nearest to the well-established trunk line from England to India and China.

4. It is the only line upon which it can be calculated, with any degree of certainty, derived from actual experience, that *not only the Mails can be carried* within 60 days either way, but that an answer may be received in or from Sydney within 125 days, allowing sufficient time for correspondence between arrival and departure of the Mails.

5. That Sydney would be the first port of arrival, and last of departure, is an advantage which may very fairly be likewise claimed by Melbourne; we should, therefore, feel a serious difficulty to overcome if our scheme did not provide a perfect equality in that respect; only we think it would scarcely be fair or consistent that New South Wales should be absolutely placed, in that respect, at a disadvantage; and, in fact, we believe that the scheme to adopt the eastern route from Pointe de Galle, *via* Melbourne, to Sydney, *only*, is absolutely impracticable, as we shall shew presently.

In establishing the line from Singapore to Sydney direct, we have calculated that, bringing the Mails within fifty-nine to sixty days to and from London, not more than five days could be allowed for despatching the return Mail from Sydney, to be in time for the *next* return Mail to Europe, from Singapore. To go on to Melbourne, and allow time for correspondence from Victoria and the other Colonies, would require an additional delay, which would bring the Mail necessarily over to the next half-monthly Mail, so that a return correspondence could not be obtained in less than one hundred and forty days.

We believe that precisely similar calculation will apply to the proposed line from Pointe de Galle to Melbourne, and thence to Sydney; so that by a combination of these two Colonies, *to either one route*, both would be placed to a great disadvantage, the question in the choice being, not which should have the greatest advantage, but which should have the least disadvantage.

We believe that the following scheme, if adopted, and initiated by Your Excellency, would be hailed with satisfaction by the several Colonies, and approved by Her Majesty's Government.

1. Mails should be despatched from Southampton, by the established Overland Route, on the 5th of every month, and supplemented on the 9th, *via* Marseilles, on to Singapore, and thence by the Torres Strait route direct to Sydney, and forwarded to New Zealand; and on the 20th of every month, supplemented on the 24th, to Pointe de Galle, and thence direct to Melbourne, touching at King George's Sound and Kangaroo Island, and leaving the Mails for Western and South Australia, while the Mail for Tasmania would be forwarded immediately from Melbourne to Launceston.

Both Melbourne and Sydney should reciprocally forward any European Mails which may be forwarded by their respective routes, without any additional charge. By this arrangement, both Melbourne and Sydney would each have *monthly* a direct arrival and departure of a Mail within sixty days from London, and an indirect one within sixty-three to sixty-four days; while all the other Colonies will partake fully in all the advantages which their geographical position will permit.

2. The entire cost of this service should be borne equally between the Home Government and the Colonies, and we estimate the expense as follows:—

(a.) For an additional payment by the Home Government, to the Peninsular and Oriental Company, for carrying all the Australian Mails between Southampton and Singapore, and Pointe de Galle, and for a reduction in the charge to the East India Company ..... £20,000

[We believe that this Estimate is very liberal. The Peninsular and Oriental Company is under their contract obliged to carry any Mails put on board, deliverable at any port on the line; but the Home Government would not take advantage of that stipulation, and would grant a reasonable compensation for the additional service. Calculating therefore, that in forty-eight trips per annum, the Peninsular and Oriental Company would have to carry 5 tons, or 250 cubic feet extra Mails, and allowing £40 per ton extra freight, £10,000 per annum would very liberally remunerate the Company; and the East India Company would probably be well satisfied with a reduction of £10,000 in its subsidy.]

(b.)

Brought forward.....	£20,000
(b.) For the service between Singapore and Sydney, as per tender ...	36,000
Transmission of the Mails to and from New Zealand .....	2,400
(c.) For the service between Pointe de Galle and Melbourne .....	50,000
[We believe that the Peninsular and Oriental Company will readily undertake this service for the proposed sum, after receiving £10,000 for the Mails as above, when the service is disencumbered of the conditions to proceed to Sydney, which involves the necessity of employing three boats, while the service to Melbourne only, as specified, can be effected by the Peninsular and Oriental Company, who have always reserve boats on the Indian line, with two boats.]	
Steamer between Kangaroo Island and Adelaide .....	600
Steamer between Melbourne and Tasmania.....	1,000
<hr/>	
Total cost of Service .....	£110,000

The Home Government being prepared to bear one-half of the total cost of the Service, would therefore be chargeable with £55,000; and as it may fairly be calculated that, by the more frequent communication of *twice* in every month, the postal revenue will increase to at least £50,000 per annum; and the Home Government retaining all its receipts, which may be computed at £25,000, the actual loss to the Imperial Exchequer will be reduced to about £30,000.

(d.) The Service of the two Australian branch lines should be under the immediate control and management of the Governments of New South Wales and Victoria; and the subsidies they would have to pay being respectively as estimated, £38,400 and £51,600, they should receive the following fixed contributions:—

NEW SOUTH WALES.	
From the Home Government .....	£15,000
From New Zealand .....	6,400
<hr/>	
	21,400
Probable amount of Postages receivable in New South Wales .....	7,000
<hr/>	
	28,400
Annual loss to the Treasury of New South Wales .....	10,000
<hr/>	
The estimated cost of Service .....	£38,400
VICTORIA.	
From the Home Government .....	20,000
From Western Australia .....	1,000
From South Australia .....	3,600
From Tasmania.....	4,000
<hr/>	
	28,600
Probable amount of Postages receivable in Victoria .....	10,000
<hr/>	
	38,600
Annual loss to the Treasury of Victoria .....	18,000
<hr/>	
The Estimated Cost of Service.....	£51,600
<hr/>	
The Colonies of Western Australia, South Australia, Tasmania, and New Zealand, would thus contribute a total of .....	15,000
And receiving in postages about .....	8,000
<hr/>	
Would, in the aggregate, only have an annual loss of .....	7,000

(e.)

(e.) Pre-payment of all letters and newspapers, &c., &c., should be absolutely required; and each Colony, as well as the Home Government, to retain the amounts received. There only remains to make some provision in respect of letters posted in the Colonies, for Continental or other Foreign Countries; which, we apprehend, will be better left entirely to the Home Government, to receive the whole of the additional postage, and to account with such Foreign countries.

Respecting the position of this Postal Communication with the Imperial Government, we believe that Your Excellency need be under no apprehension that any definite steps will be taken to establish the route proposed, by the Lords of the Treasury, upon the strength of the Despatches of Your Excellency, or those from Victoria. Our private information perfectly coincides with the official announcements, in the Treasury Minute of the 27th November, and by the Duke of Argyll, upon the interpellation of the Earl of Hardwicke, *on the 7th April last*. Their Lordships say, in alluding to the offers of contributions from the several Colonies,—“that although they place the utmost reliance upon the spirit in which they have been made, yet it is most desirable there should be *no possible misunderstanding*.” Again, section 5 of the proposed plan, their Lordships distinctly state,—“*In the first place it will be necessary to obtain from each of the Colonies named, a duly authorized Legislative acquiescence in the arrangement proposed, &c., &c.*; and My Lords, relying upon the correspondence before them, from the Governors of New South Wales and Victoria, have decided to take immediate steps to secure the earliest possible commencement of the Service, *after the receipt of communications from the different Colonies, acquiescing in the proposed arrangements.*” The Duke of Argyll states,—“that the advantages of the several routes remain an open question; and that before any plans could be carried out, the general assent of the Colonies would be obtained.” Our private information goes to the effect, that the Lords of the Treasury will not authorize any permanent arrangement, to which the interested Colonies shall not have given their distinct assent, through the newly-established Legislatures; that their Lordships find extreme difficulty to devise any plan to do justice to the several interests of the Colonies; and would favorably receive any plan, by which the Colonies would themselves undertake the management and responsibility of the Service, from any point of the Indian line; as the Colonial Governments would be better able to control that portion of the Service; while also the contracts would be more simplified; as the Imperial Government would only have to contract for delivering and receiving the Mails, at and from the two points of the established Indian line; while a Tender to the Imperial Government, for the entire service, would include a separate line *all the way*. In every way, the authorities at the Post Office and the Treasury appear to favor the proposal that the Colonial Governments should contract themselves, for the Services *to the southward of the Indian line*, and send their own officers to take charge of the Mails from the Imperial officers, and deliver them those they bring for Europe.

Your Excellency will observe, that in the above Estimate we have only approximately divided the contributions of the several Colonies, upon the basis proposed by the Lords of the Treasury, to divide the whole cost equally between the several Colonies and Home Government. We believe that the total cost will be found substantially correct. For New South Wales we speak, of course, positively; and we think that it would be more convenient for New South Wales and Victoria to accept from the other Colonies a rather moderate and, to them, favorable fixed contribution, than to ascertain, every two years, the letters despatched by each.

We have abstained from entering upon any comparison with other routes; and beg leave only to observe that no other would produce, in equal degree, that cohesion of the British Possessions so desirable in commercial, social, and political points of view. Your Excellency and the Legislature will decide between them, when any clear and distinct offers are made.

We hope that your Excellency will see sufficient grounds to communicate our general proposal to the Governments of the Sister Colonies, and to bring our offer to effect the service for this Colony before the Legislature of this Colony, immediately upon its re-assembling.

We remain, &c.,

BEIT & SONS.

TO HIS EXCELLENCY

SIR WILLIAM DENISON, KNT.,  
Governor General, &c., &c.

TENDER

## TENDER OF CONTRACT FOR STEAM POSTAL COMMUNICATION.

*Sydney, 11 July, 1856.*

On behalf of the Directors of the "Australian General Investment Association," of London, and as their lawfully-constituted and authorized attorneys, we make the following offer of Contract for the conveyance of Mails to and from Europe:—

1 The Company will contract, under the usual guarantee, to carry all the Mails between Sydney and Singapore *via* Torres Straits, either way once a month, by Steamers of not less than 400 tons measurement, and not less than 100-horse power, and to perform the passages within 22 days. The days of departure from Singapore to be so fixed as to bring on the Mails leaving London the beginning of every month, and the days of departure from Sydney so fixed as to meet the next Mail leaving Singapore for London, which can be so arranged as to allow an interval of five or six days between the arrival and next departure from Sydney.

Besides the Mails, the Company will engage to provide a cabin-passage for a Mail-master, or (at the option of the Government) require the Captains to take the usual Post Office oaths or declaration, and to perform such services as the Postmaster General of this Colony shall require of them in respect of delivering and receiving the Mails; and the Company will further engage, so soon as the Government may have established a station at Port Albany, to call there and deliver Mails, and land passengers.

It shall be optional with the Company whether to call at Java or not.

The Company will also engage to carry Naval and Military Officers and Men, and packages containing astronomical instruments, wearing apparel, medicines, &c., &c., in the proportions, and on the terms usually inserted in Contracts made by the Lords of the Admiralty.

2. This Service,—to which the Company will devote three boats, of the most improved construction, and of which one will always be in reserve in Sydney,—the Company will undertake for a subsidy of £36,000 per annum, payable in Sydney monthly, within fourteen days after the expiration of the previous month.

3 The Company will engage to despatch, within six months after receipt of a definitely-concluded Contract in London, or after ratification of the same, if required, by the Home Government, the first Steamboat with a Mail direct to Sydney, and to despatch in the two succeeding months the other two boats, which, after arrival in Sydney, will at once successively be despatched for Singapore, and so open a permanent line.

Should this Government think it necessary, before finally concluding any Contract, to obtain the concurrence and ratification of the Home Government, we are authorized and willing to conclude such Contract irrevocably on behalf of the Company, but subject, on the part of the Government, to be ratified or rejected after being received by Her Majesty's Secretary for the Colonies; such ratification or rejection to be signified to the Directors of the Company within one month after arrival of the Despatches and the Contract in London.

BEIT &amp; SONS.





1856.

## NEW SOUTH WALES.

## STEAM NAVIGATION BETWEEN THE COLONIES.

(MEMORANDUM OF DELEGATES ON LIGHT HOUSES.)

*Ordered by the Legislative Assembly to be Printed, 18 December, 1856.*

## MEMORANDUM.

Having duly considered the existing Laws relating to Steam Navigation in New South Wales and Victoria, and the necessity for the establishment of an uniform system of control and conservancy, we have agreed to recommend the following suggestions for the consideration of our respective Governments.

With a view of securing efficiency, as well as simplicity, in any modifications which it may be advisable to make in the Acts at present in existence, we would suggest, that as far as it may be practicable or consistent with the views of the several Colonies interested, the Imperial Acts for the amendment and consolidation of the laws relating to the Merchant Shipping, where they apply to the regulation of Steam Navigation, be adopted, and the Local Acts now in operation be repealed; or, should such a course be not deemed prudent, we would recommend that in any Acts which may be submitted for the consideration of the Legislatures to amend those now in force, the following provisions of the Imperial Statute be, as far as possible, enacted:—

- The Regulations for Boats and Life Buoys in accordance with Table S.
- Those as to Light and Fog Signals.
- Those as to Ships meeting and passing each other.
- Those as to the adjustment of Compasses.
- Those as to Shelter for Deck Passengers.
- The mode of making Surveys and the appointment of Surveyors.
- The transmission of Declarations and issue of Certificates.
- The necessity of Safety-valves on each Boiler.
- The Penalty for placing undue weight on Safety-valve.

We would also recommend the following provisions, in addition to those provided in the Act of Parliament, viz.:—

- Quarterly Survey of Steam Vessels propelled by High Pressure Engines.
- Steam not to be turned off. Steam-Gauge under penalty.
- Gangway Stage necessary to River Boats.

We would likewise recommend for adoption the Scale of Fees as set forth in Schedule T, making, however, a reduction of one-half the charge in favor of vessels requiring a quarterly instead of a half-yearly survey. And, with a view of promoting the intercourse and commercial relations between the two Colonies of New South Wales and Victoria, we are prepared to advise that Surveys granted in one Colony should, during their currency, be received and held to be sufficient, for all purposes of the Act, in the other: Provided that the same be granted by an authority similar to that constituted under either the Imperial or the existing Colonial Acts, and that power be reserved to cancel or revoke any such Certificate so granted, should it appear that, during its currency, any accident has been sustained by the vessel to which it refers, or any circumstances arise to justify such a course.

In carrying out an arrangement of this kind, it will be requisite, in order to prevent any undue advantage being taken by either Colony, that an account be kept of all Fees received for Steam Vessels trading between the two Colonies, and that the proceeds be equally divided.

Melbourne, 26 August, 1856.

HUGUEZ CHILDERS.  
H. H. BROWNE.

1877

NEW SOUTH WALES

THE BOARD OF TRADE

OF THE PORT OF SYDNEY

1877

The Board of Trade of the Port of Sydney, in pursuance of the provisions of the Act in that behalf made, do hereby give notice that the following is a list of the names of the persons who have been appointed to the office of Pilot of the Port of Sydney, and who are to be sworn in as such Pilots on the 1st day of January next.

1. The name of the person appointed to the office of Pilot of the Port of Sydney, and who is to be sworn in as such Pilot on the 1st day of January next, is the name of the person whose name is first mentioned in the following list, to-wit:—

The name of the person appointed to the office of Pilot of the Port of Sydney, and who is to be sworn in as such Pilot on the 1st day of January next, is the name of the person whose name is first mentioned in the following list, to-wit:—

The name of the person appointed to the office of Pilot of the Port of Sydney, and who is to be sworn in as such Pilot on the 1st day of January next, is the name of the person whose name is first mentioned in the following list, to-wit:—

The name of the person appointed to the office of Pilot of the Port of Sydney, and who is to be sworn in as such Pilot on the 1st day of January next, is the name of the person whose name is first mentioned in the following list, to-wit:—

The name of the person appointed to the office of Pilot of the Port of Sydney, and who is to be sworn in as such Pilot on the 1st day of January next, is the name of the person whose name is first mentioned in the following list, to-wit:—

1857.

## NEW SOUTH WALES.

## LOCAL BOARD AND STEAM TUG FOR PORT OF NEWCASTLE.

(CHAIRMAN, &amp;c., OF NEWCASTLE CHAMBER OF COMMERCE.)

*Ordered by the Legislative Assembly to be Printed, 27 January, 1857.*

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.  
The Petition of the undersigned, the Chairman, Deputy Chairman, and Committee of the  
Newcastle Chamber of Commerce, in the said Colony,—

HUMBLY SHEWETH:—

That Newcastle has acquired an unfortunate notoriety from the number of wrecks which occur at the Port, and which, in their consequences, are as repugnant to humanity as they are detrimental to commerce.

That these wrecks have, at various times, occupied the attention of the Government, which has vainly endeavoured to carry out means for their prevention, and to remedy those defective port arrangements which have been the subject of just and continued complaint; that with proper precautions, under an effective direction and supervision, and with those means of precaution adapted to the necessities of the Harbour, which in similar cases, are provided elsewhere, the Port of Newcastle may be rendered as safe for vessels as are most other harbours—as is proved by the recent safe arrival here of the “Punderiald,” a ship of fifteen hundred tons register, and of the “Edmond,” of nearly one thousand tons register.

That the distant management in which the Port arrangements of Newcastle are vested is the neutralizing cause which renders ineffective the efforts of the Government to remedy evils which have reflected discreditably on the Executive, and injuriously on the Port.

That your Petitioners' experience enables them confidently to state that the establishment of a Local Harbour and Pilot Board, for the direction and supervision of the affairs of the Port of Newcastle, as is provided in every like instance in England, is the only remedy for the evils complained of.

That your Petitioners, having earnestly called the attention of the Executive to the subject, and pointed to local direction, as here indicated, as the remedy, had waited in the confident expectation that the magnitude of the evil, and the claims of humanity and of trade, would have caused provision to be made for the purpose on the Estimates: But your Petitioners regret to observe that, while a Light Navigation and Pilot Board is provided on the Estimates for Sydney, no similar provision, to any extent, is made for this Port; nor is any other indication afforded by the Executive of the slightest attempt at a remedy.

That, as a means, under local direction, a powerful Steam Tug is of the first importance here for the prevention of wrecks.

That it can be shewn, by practical men, that nearly all the wrecks which have occurred at the Port of Newcastle might have been prevented had the vessels been assisted at the proper time by a powerful Steam Tug.

That the aid of a Steam Tug is also necessary, in entering and leaving the Port, to vessels which, during certain prevailing winds, are detained at sea or in harbour for want of such aid, and that much risk and loss are consequently incurred, to the detriment of trade and of the Port.

That the removal of vessels to and from the coal shoots in harbour, which is now frequently tedious and difficult, also requires such assistance.

That confirmatory proof on this head is also supplied by the fact that a Tug Boat was specially brought down here to assist the ship "Dundonald," with freight, on Government account, into Port.

That, for these reasons, the establishment of a Tug Boat is connected with the Pilotage and general economy of the Port of Newcastle, and should be supported by dues levied for the purpose on all shipping entering the Harbour.

That the interests of Colonial Commerce, which are largely concerned in this question, as well as considerations of humanity, strongly call for immediate legislation upon it.

That your Petitioners therefore humbly pray:—

First—That in addition to the provision already made for the establishment of a Light Navigation and Pilot Board in Sydney, your Honorable House will be pleased to provide for the appointment of a Local Board here, to direct and supervise the public business of this Port, and that your Honorable House will be pleased also to cause a measure to be passed giving the necessary powers for that purpose.

Secondly—That your Honorable House will be pleased to grant powers for the establishment and maintenance of a first-class Steam Tug for the service of this Port, to be supported by dues to be levied for the purpose.

And your Petitioners will ever pray.

[Here follow eleven Signatures.]

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1856.

NEW SOUTH WALES.

# SHIPPING LAWS.

(MERCHANTS, SHIPOWNERS, &amp;c.)

*Ordered by the Legislative Assembly to be Printed, 19 December, 1856.*

To the Honorable the Members of the Legislative Assembly of New South Wales, in  
Parliament assembled.

The humble Petition of the Merchants, Shipowners, Masters, and others connected with  
the Shipping Interests of the said Colony,—

SHEWETH:—

That your Petitioners, at a meeting convened at the "Dove Inn," Sussex-street, Sydney, on the 19th day of November last, for the purpose of considering the Merchant Seamen's, Water Police, and other Acts upon the Shipping Laws now in force in the said Colony, and particularly at the Port of Sydney, resolved unanimously to Petition your Honorable House upon their general greivances, arising from the operation of the said Acts.

Your Petitioners humbly complain of the inefficiency of the Shipping Master's Department, and that the regulations operate prejudicially to the Masters of Vessels, as well as to seamen, causing them (the Masters) to lose much time in attending to ship and discharge their seamen, and in particular where they have the command of coasting vessels and steamers, especially the Port Phillip and New Zealand steamboats, whose crews consist of *forty* men each; they have to be discharged and re-shipped every month, thereby causing a great loss of time to Masters and Owners, besides the expense of paying two shillings for shipping, and two shillings the seamen have to pay for being discharged and re-shipped, although they do not want to leave their vessels. The men complain of the heavy tax imposed upon them, and the Masters feel aggrieved having to employ labourers while they are absent at the Shipping Office—which is a great loss to the Owners. Coasters are exempt from this great expense and annoyance in England—Masters being required to make a Return to the Shipping Master every six months by a declaration only.

Whereas, under the old system, Agents performed the duties, without taking the Masters from their vessels and otherwise; and these Agents were then only required to ship such new hands as might be required, and not, as now, all hands every month; and by this arrangement, both Masters and men were saved considerable expense and time.

The present law, besides, having a tendency to engender in the feelings of the men the idea of a surveillance so repugnant to the feelings of a British seaman.

Your Petitioners complain of the operation of the present Shipping Act as an infringement on the rights of Free Trade—the Government performing for a profit, and the public being put to the great and unnecessary expense of a department to do the legitimate business of independent Agents of those Masters and Merchants who would otherwise do the business for themselves, at no expense.

Your Petitioners humbly suggest that the late Shipping Act, with some few alterations and additions, would be better adapted to the present wants and requirements of the present enlightened and progressive state of the Colony.

Your Petitioners complain also of the unnecessary stringency of the Police Act in many particulars, one of which is, that they are bound to keep watch on board their vessels at night, although they may be moored to the wharfs, at all of which are employed watchmen amply sufficient for the protection of property.

Also, that those Masters of Vessels engaged in the coal trade find considerable difficulty in shipping men, who, after working hard in unloading during the day, will not agree to keep watch during the night, as they require rest.

Your Petitioners, therefore, humbly pray your Honorable House will take into consideration their grievances, and appoint a Committee of Inquiry of your Honorable House, with a view of affording your Petitioners such redress as may be required.

And your Petitioners will, as in duty bound, ever pray.

*[Here follow 48 Signatures.]*

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1857.

NEW SOUTH WALES.

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## SHIPPING MASTER'S DEPARTMENT

(SHIP OWNERS &c., OF THE PORT OF SYDNEY.)

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*Ordered by the Legislative Assembly to be Printed, 3 February, 1857.*

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To the Honorable the Members of the Legislative Assembly in Parliament assembled.

The Petition of the undersigned Shipowners, Ship-masters, and others interested in the Trade and Shipping of the Port of Sydney, present at a Public Meeting held at the Exchange, on Friday, the 16th January, 1857, and others,—

HUMBLY SHEWETH :—

That your Petitioners view with alarm the proposed reduction about to be made in the Shipping Master's Department of this Port, and most respectfully crave the attention of your Honorable House to the following observations :—

1. That prior to the formation of the Shipping Master's Office, the Owners, Masters, and Agents of vessels frequenting this port, were subjected, through the influence of crimps, and other characters of the worst description, to annoyances and impediments of such a nature, as seriously retarded the progress of Trade.

2. That greatly increased facilities have been afforded to the Shipping interest, in all its relations, by the establishment of this Office, both in economy and despatch.

3. That your Petitioners are therefore deeply impressed with the urgent necessity of maintaining its efficiency to the utmost extent, and for that purpose would even submit cheerfully to an increased scale of charges, should such be found necessary.

4. Your Petitioners respectfully submit for consideration the fact, that this Institution is not only self-supporting, but has actually yielded annually a large surplus to the General Revenue of the Colony.

5. That your Petitioners firmly believe, that the effect of the reductions recently made in the salaries and Staff of this Department, will be such as to impair materially, if not altogether destroy its utility.

Your Petitioners therefore humbly pray, that your Honorable House taking the premises into your favourable consideration, will be pleased to adopt such measures as to your Honorable House may seem meet to effect the desired object, and afford such relief as the necessities of the case may require for the purpose of retaining the Shipping Office in a state of efficiency.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 165 Signatures.]

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1856.

NEW SOUTH WALES.

# RIVER HUNTER.

(DEEPENING OF, AND SPECIFICATIONS THEREWITH)

*Ordered by the Legislative Assembly to be Printed, 8 August, 1856.*

RETURN to an *Order* of the Honorable the Legislative Assembly, dated 3 June, 1856, for—

“ All the Correspondence that has passed between the Executive Government and Mr. Moriarty, respecting the Deepening of the River Hunter; together with Plans, and Specifications connected therewith.”\*

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\* NOTE.—These Plans and Specifications were not laid upon the Table, but deposited in the Library for present reference.

## RIVER HUNTER.

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### No. 1.

(EXTRACT.)

THE COLONIAL SECRETARY to EDWARD MORIARTY, ESQ.

*Colonial Secretary's Office,*

*Sydney, 22 November, 1855.*

SIR,

In transmitting to you the accompanying copy of a Minute of His Excellency the Governor General, respecting improvements in the River Hunter, I am directed to request, that you will prepare and transmit to me the Plans and Estimates required by His Excellency.

I have, &c.,

(Signed)

W. ELYARD.

EDWARD MORIARTY, ESQ.

[Enclosure in No. 1.]

*EXTRACT from Governor General's Minute.*

#### HUNTER RIVER IMPROVEMENTS.

1. I send back the Plans of the Hunter River, having seen Mr. Moriarty, and arranged with him to send in proper Plans and Estimates for the work to be done, of which he is to have the charge, with a salary of £750 per annum, he being answerable for the work, and providing his own means of superintendence.

2. To send in Plans and Estimates of such work as may be required to deepen the water over the Flats above Newcastle.

### No. 2.

E. O. MORIARTY, ESQ., to THE COLONIAL SECRETARY.

*Sydney, 23 November, 1855.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 22nd instant, transmitting to me a copy of the Minute of His Excellency the Governor General, respecting the proposed improvements on the Hunter River.

2. I shall immediately commence the preparation of the Plans, &c., specified in His Excellency's Minute, and shall, on their completion, do myself the honor of transmitting them to you.

As I shall immediately enter on the duties, I presume the arrangements proposed by His Excellency with regard to Salary will commence from this date.

I have, &c.,

(Signed)

E. O. MORIARTY.

THE HONORABLE

THE COLONIAL SECRETARY.

### No. 3.

THE COLONIAL SECRETARY to E. O. MORIARTY, ESQ.

*Colonial Secretary's Office,*

*Sydney, 23 April, 1856.*

SIR,

I am directed by the Governor General to request, that you will, as soon as possible, submit the Plans and Specifications of the work to be done, in clearing and deepening the River Hunter, which His Excellency considers you have been very long about.

I have, &c.,

(Signed)

W. ELYARD.

E. O. MORIARTY, ESQ.

## DEEPENING OF THE RIVER HUNTER.

3

No. 4.

E. O. MORIARTY, ESQ., to THE COLONIAL SECRETARY.

29 April, 1856.

SIR,

I do myself the honor to forward you, for the sanction of His Excellency the Governor General, the accompanying Plans, Specification, and Estimates of the work to be done, in clearing and deepening the River Hunter, at the Flats.

I have, &amp;c.,

(Signed)

E. O. MORIARTY.

THE HONORABLE

THE COLONIAL SECRETARY.

[Enclosure in No. 4.]

*GENERAL SPECIFICATION of Work to be done, in clearing and deepening the Hunter River, at the Flats.*

Sydney, 29 April, 1856.

The principal obstructions to the navigation, in that part of the River Hunter called the Flats, occur near the small Horse-shoe Bank, abreast of Snapper-hole Island. It is here that the waters of the river, having been divided amongst four channels, lose in some degree the velocity due to their united volume; so that the particles of sand and other matters which they had brought thus far, are deposited, forming banks and shoals, which, in process of time, have been converted into islands.

That the estuary of Fullerton's Cove exercises considerable influence on the direction of the current, and on the form of the channel below it, will be evident on examination of the ebb currents, indicated by the red lines on the accompanying plan; as the resultant of two lines, representing the force and direction of the ebb tide out of Fullerton's Cove and down the Hunter, will exactly strike the north-east end of Snapper-hole Island.

Before, however, reaching this point, the direction of the current has been diverted by the western edge of the Horse-shoe Bank, causing the principal body of the ebb waters to flow down the channel west of Snapper-hole Island, where it has scoured out the bed to a depth of 17 feet; while that portion of the water which passes down the other channels is comparatively insignificant, being insufficient to maintain a greater depth than from 6 to 7 feet, at low water.

There is another cause, in addition to the above, which contributes, in some degree, to the waters being drawn into this western channel, namely,—that being the straightest, and, consequently, the shortest course, the rate of declivity is greater in it than in those channels which are more tortuous.

The object, therefore, of any operations undertaken to improve the navigation over the Flats, must be to counteract the ill effects arising from crooked channels, and a divided current; so that by straightening the former, and concentrating the force of the latter in one navigable course, a scouring power shall be produced, which will be sufficient to maintain in it the required depth of water; taking care, at the same time, that the works constructed for this purpose, shall offer no material impediment to the free passage of the tidal wave up the river.

The works which, in accordance with the foregoing principles, I have marked on the plan, and which I now do myself the honor respectfully to propose for the sanction of His Excellency, are as follows:—

1st. To close, by means of sheet piling (such as shall be hereafter more particularly described), all the channels except the principal one leading into Fullerton's Cove, so that the waters entering and leaving it shall be made, (as far as is practicable,) to pass up and down the main channel of the river. The channels to be closed are marked respectively A, B, H, H I, on the accompanying plan.

2nd. To direct the current of the ebb tide flowing out of Fullerton's Cove, and guide it fair for the channel below. The rows of piles for this purpose, by being divided into three sections, and driven in the positions shown on the plan at C, C 1, C 2, although tending to direct the ebb currents, will offer no impediment to the free passage of the flood tide up the river, as they are placed in directions nearly parallel to its course.

3rd. To straighten and deepen the present channel, between the points marked E and F, by dredging away the end of the bank marked D, and tinted pink on the plan; and to form the channel to an uniform curve between the points marked F and G, by dredging through the bar at the head of the Horse-shoe Bank, and removing some of the sand on its eastern side, shown on the plan by a pink tint and letter J; and by confining the action of the water to this latter channel, by a line of sheet piling, placed in the direction shown at K. By forming the channel at this place to a fair curve, not only will the scouring effect of the water be increased, but in addition, one principal difficulty in the navigation will be removed; as all the captains of steamers plying to the Hunter are agreed, that the difficulties in the navigation of the Flats, arise nearly as much from the tortuous nature of the present channel, as from its shallowness.

41a.

4th. As soon as the new channel, above described, has been opened to the required depth of, say 10 feet at low water, we may then commence to close the upper ends of the branch channels, between the Long Bank and the mainland on the east, and between Snapper-hole and Ash Islands on the west, by rows of sheet piling, placed in the positions marked L and N.

5th. The portions tinted pink on the plan and cross sections will show where it is proposed to dredge out the new channel, to be not less than 100 feet wide, on each side of the curved black line marked on the plan, or 200 feet in full width at the narrowest part (in most places it will be considerably more); but I have no doubt, when the channel is once formed even to this breadth, which will be sufficient for the present steam traffic, that the action of the water, when once fairly directed into it, will in a short time widen it considerably.

6th. The sheet piling may consist of the common slabs of the country, driven between guide piles and wales, in the manner shown by a sketch on the accompanying plan. If necessary, it could be removed without difficulty, and placed in any other position, at a trifling cost; or, by being backed up with fascines and sand, would form a good permanent embankment.

The approximate cost of the proposed works, given in detail, is as follows:—

	£	s.	d.
<b>TO FORMING NEW CHANNEL BETWEEN F AND G.</b>			
Excavation, 102,135 cubic yards, at 1s. 6d. ... ..	7,660	0	0
<b>TO FORMING NEW CHANNEL AT D.</b>			
Excavation, 63,434 cubic yards, at 1s. 6d. ... ..	4,757	0	0
<b>SHEET PILING.</b>			
At A, 77 yards lineal, at £1 13s. ... ..	£127	0	0
— B, 77 ditto ditto ... ..	127	0	0
— C, 88 ditto ditto ... ..	145	0	0
— C', 187 ditto ditto ... ..	308	0	0
— C'', 176 ditto ditto ... ..	290	0	0
— H, 286 ditto ditto ... ..	472	0	0
— H', 55 ditto ditto ... ..	91	0	0
— K, 748 ditto ditto ... ..	1,234	0	0
— L, 110 ditto ditto ... ..	181	0	0
— M', 176 ditto ditto ... ..	290	0	0
— N, 231 ditto at £3 ... ..	693	0	0
		3,958	0 0
<b>Total</b> ... ..	<b>£16,375</b>	<b>0</b>	<b>0</b>

E. O. MORIARTY.

No. 5.

THE COLONIAL SECRETARY to E. O. MORIARTY, Esq, E. C.

*Colonial Secretary's Office,  
Sydney, 27 May, 1856.*

SIR,

I have the honor to inform you that the Governor General has laid before the Executive Council your letter of the 29th ultimo, submitting a Plan, Specification, and Estimate of the work to be done in clearing and deepening the River Hunter at the Flats.

2. This work, the entire cost of which is estimated at £16,375, is divided by you into three portions, viz. :—

- (1.) Forming a new channel between the points marked F and G on the plan, £7,660.
- (2.) Forming a new channel at the points marded D on the plan, £4,757.
- (3.) Piling at all the points indicated thereon, £3,958.

3. Fortified by the opinion of the Governor General, who has personally examined the locality, the Council advised that the work indicated in the first two subdivisions should be deferred for the present; but that the Piling should be at once proceeded with, except at the spot marked K on the plan, which will also be deferred until experience is gained of the result of the Piling in the other portions of the River.

4. I am accordingly directed by His Excellency to request, that you will submit a notice for publication, inviting Tenders for the performance of that portion of the work now sanctioned, the cost of which is estimated at £2,724.

I have, &c.,  
(Signed) W. ELYARD.

E. O. MORIARTY, Esq., C. E.

No. 6.

E. O. MORIARTY, Esq., to THE COLONIAL SECRETARY.

*Sydney, 3 June, 1856.*

SIR,

I have the honor to forward you a notice for publication, inviting Tenders for the performance of the Sheet Piling on the Hunter River Flats, the sanction of which by His Excellency the Governor General, was conveyed to me in your letter of the 27th May last.

I have, &c.,  
(Signed) E. O. MORIARTY.

THE HONORABLE  
THE COLONIAL SECRETARY.

No. 7.

[Enclosure in No. 6.]

*Colonial Secretary's Office,  
Sydney, 7 June, 1856.*

TO CONTRACTORS AND OTHERS.

Tenders will be received at this Office until 12 o'clock of Monday, the 23rd instant, from persons willing to contract for the execution of Sheet Piling on the Flats of the River Hunter.

Plans, Specifications, and all further particulars, can be obtained on application at the Office of Mr. E. O. Moriarty, Civil Engineer, Mort's Buildings, Pitt-street, Sydney.

Tenders to be endorsed, "Tender for Sheet Piling."

Tenders must state the time within which it is proposed to complete the work, and at the foot of every Tender there must be a memorandum signed by the party tendering, and two responsible persons as sureties, agreeing to be answerable for the due performance of the Contract, in the event of the Tender being accepted, and undertaking, in that event, that they will severally execute and deliver, at the Office of the Civil Crown Solicitor, in Sydney, or at the Police Office, Newcastle, within ten days from the usual notification of acceptance, a Bond to Her Majesty, in the penal sum of £500, for securing such performance, otherwise the Tender will not be taken into consideration.

The party tendering, or an agent authorized in writing to act for him, is requested to attend at this Office at the time appointed for receiving the Tenders, to afford such explanation or information as may be required.

(Signed) STUART A. DONALDSON.

No. 8.

E. O. MORIARTY, Esq., to THE COLONIAL SECRETARY.

*Pitt-street, Sydney,  
23 June, 1856.*

SIR,

I do myself the honor to enclose you a Schedule of the Tenders which have been made, by persons desirous of contracting for the execution of the Sheet Piling, to be constructed on the Flats of the River Hunter.

The Tender of Mr. W. Strong being the lowest, and as he is, I believe, quite competent to carry out the work efficiently, I beg to recommend the acceptance of his Tender.

I have, &c.,  
(Signed) E. O. MORIARTY.

THE HONORABLE  
THE COLONIAL SECRETARY.

## No. 9

THE COLONIAL SECRETARY to E. O. MORIARTY, ESQ., C. E.

(Copy.)

*Immediate.**Colonial Secretary's Office,  
Sydney, 4 July, 1856.*

SIR,

I am directed to inform you, that the Tender of Mr. William Strong, for Sheet Piling to be constructed in the River Hunter, at the Flats, has been this day accepted, and that he has been referred to you for further information, and to the Civil Crown Solicitor, for the purpose of signing the necessary Bond for the due observance of his contract.

The Bond will be forwarded to you, when executed.

I have, &amp;c.,

(Signed) W. ELYARD.

E. O. MORIARTY, ESQ., C. E.,  
Sydney.

## No. 10.

THE COLONIAL SECRETARY to E. O. MORIARTY, ESQ., C. E.

(Copy.)

56-5586.

*Colonial Secretary's Office,  
Sydney, 11 July, 1856.*

SIR,

With reference to your letter of the 23rd ultimo, submitting a Schedule of Tenders for the execution of the Sheet Piling to be constructed on the Flats of the River Hunter, and to my reply of the 4th instant, approving of the Tender of Mr. Strong for the performance of that work, I am directed to request, that you will be good enough to inform me whether the Contract has been accepted for the whole of the work according to your Estimate, amounting to £3,958, or for the reduced amount of £2,724, excluding the item of £1,234, marked K in the Estimate referred to.

I have, &amp;c.,

(Signed) W. ELYARD.

E. O. MORIARTY, ESQ., C. E.

## No. 11.

E. O. MORIARTY, ESQ., to THE COLONIAL SECRETARY.

*Pitt-street, Sydney,  
11 July, 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter of this date, inquiring whether the Contract for Sheet Piling on the Flats of the River Hunter has been accepted for the whole of the Works, according to my Estimate, amounting to £3,958, or for the reduced amount of £2,724, excluding the item of £1,234, marked K in the Estimate referred to.

In reply, I do myself the honor to inform you, that the item K (£1,234) has been excluded from the Tender of Mr. Strong, and also from my Specification of the work to be performed.

Mr. Strong's Tender for some portions of the work is above my Estimate, for other portions a little below; but the total amount of his Tender for the work (excluding K) is above the amount I had estimated for it; the sum by which it exceeds it I cannot, just now name, as the papers relating to the subject have not yet been returned to my office from the Civil Crown Solicitor.

I have, &amp;c.,

(Signed)

E. O. MORIARTY.

THE HONORABLE  
THE COLONIAL SECRETARY.

## No. 12.

THE COLONIAL SECRETARY to E. O. MORIARTY, Esq., C. E.

(Copy.)  
56-6,046.*Colonial Secretary's Office,*  
*Sydney, 16 July, 1856.*

SIR,

I am directed to acknowledge the receipt of your letter of the 11th instant, respecting Mr. Strong's Contract for Sheet Piling on the Flats of the River Hunter, and to inform you, that as his Tender exceeds your Estimate by 50 per cent., or nearly so, it does not tell well of the accuracy of the data on which the Estimate was founded; the work may, however, proceed, as intimated to you in my communication of the 4th instant.

I have, &amp;c.,

(Signed)

W. ELYARD.

E. O. MORIARTY, Esq., C. E.,  
Sydney.

## No. 13.

E. O. MORIARTY, Esq., to THE COLONIAL SECRETARY.

*38, Pitt-street, 19 July, 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 16th inst., in reference to the Sheet Piling for the Flats of the River Hunter.

I must admit that I was a good deal surprised at the difference between the amount of my Estimate for the work and Mr. Strong's Tender—a difference for which I was wholly unable to account before, not having until to-day received back the papers on the subject.

On carefully going into the matter again, I find that the discrepancy arises principally from a clerical error in the Estimates which I submitted to the Government, wherein a wrong price was placed opposite the items C<sup>s</sup> and M<sup>s</sup>, which were charged at £1 13s. per yard run, instead of £3, the latter being the price I had estimated for the 15 feet deep Piling, and which is only one shilling per yard run above the price in the Tender. The Specification states that the Sheet Piling at C<sup>s</sup> and M<sup>s</sup> shall be 15 feet deep, and that this depth will be required at these spots will be evident, on examining the Plans, which I do myself the honor of returning to your office for that purpose. You will observe that the depth of water being about 8 feet at low-water *spring tides*, the 10 foot Sheet Piling would have been quite insufficient.

My Estimate for the work, if these items had been put at their proper prices, would have been £3,200, or £411 17s. under the Tender, the latter being £3,611 17s.; a discrepancy which is not so very great, when it is remembered that most of this work can only be executed during certain times of tide, and not at all in stormy weather; both of which are circumstances of which a contractor would be certain to take full advantage, in framing his tender.

With reference to the difference between Estimates and Tenders generally, I may, perhaps, be excused for observing, that the fluctuations in the price of labor are so great, that it is exceedingly difficult, if not impossible, to make them agree. In proof of this I may instance the Breakwater, the tenders for the repairs to which vary from £7,408 to £2,985; the latter being the price for which we are getting the work performed; my own Estimate having been about a mean proportional of them all.

I have, &amp;c.,

(Signed)

E. O. MORIARTY.

THE HONORABLE  
THE COLONIAL SECRETARY.



## No. 14.

THE COLONIAL SECRETARY to E. O. MORIARTY, Esq., C. E.

(Copy.)  
56-6259.*Colonial Secretary's Office,  
Sydney, 24 July, 1856.*

SIR,

I am directed to acknowledge the receipt of your letter of the 19th instant, and to inform you, that your explanation in reference to your Estimate, and Mr. Strong's Tender for the Sheet Piling, for the Flats of the River Hunter, appears to be satisfactory.

2. The Specification forwarded in your communication is herewith returned.

I have, &amp;c.,

(Signed)

W. ELYARD.

E. O. MORIARTY, Esq., C. E.

## No. 15.

THE CIVIL CROWN SOLICITOR to THE COLONIAL SECRETARY.

*Civil Crown Solicitor's Office,  
Sydney, 15 July, 1856.*

SIR,

In compliance with the instructions contained in your communication of the 4th instant, No. 56-464, I have the honor to transmit the necessary Bond, executed by Mr. Strong, for the fulfilment of his Contract for Sheet Piling, to be constructed at the Flats in the River Hunter. The Plans and Specifications have been handed to Mr. Geary, foreman to Mr. Moriarty.

I have, &amp;c.,

(Signed)

W. W. BILLYARD,

Civil Crown Solicitor.

THE HONORABLE

THE COLONIAL SECRETARY.

## No. 16.

THE COLONIAL SECRETARY to E. O. MORIARTY, Esq., C. E.

(Copy.)  
56-6185.*Colonial Secretary's Office,  
Sydney, 23 July, 1856.*

SIR,

I am directed to transmit herewith, duly executed by John F. Strong and his Sureties, the Bond for the fulfilment of his Contract for Sheet Piling, to be constructed at the Flats in the River Hunter, and to request that you will acknowledge its receipt.

I have, &amp;c.,

(Signed)

W. ELYARD.

E. O. MORIARTY, Esq., C. E.

[Enclosure 1 in No. 16.]

## HUNTER RIVER IMPROVEMENTS.—SPECIFICATION FOR SHEET PILING AT THE FLATS.

The work embraced in this Contract will consist in the construction of the undermentioned lengths of Sheet Piling, to be driven in the positions shewn on the general plan of the Hunter River, hereunto attached, and marked respectively (A, B, C, C', C'', H, H', L, M<sup>3</sup>, N,) thereon.

2. The length of Sheet Piling across the upper channel, into Fullerton's Cove, marked A on the general plan, will be about 77 yards, the depth 10 feet. It will be formed by driving a row of guide piles, at distances of 15 feet apart from centre to centre. These are to be not less than 10 inches through, in their least dimension, and 15 feet long. They may be roughly squared only on the two sides adjoining the sheet piles, and shall be driven at least 8 feet into the ground. On each side of the row of guide piles, walings must be fixed, and fastened by wrought iron bolts of 1 inch in diameter, with proper heads, nuts, and washers. These wales may consist of half timbers 10 in. × 6 in., and 16 feet 6 inches long, the ends being notched where they join the piles, and the piles being notched in, one inch to receive them, so that when secured in their place, there shall be a space of about 3 inches broad between their inner edges, in which the sheet piles will be driven. The sheet piles shall consist of slabs of iron bark, or other approved timber, sawn or split. They shall be not less than 9 inches wide, and 3 inches thick, and 10 feet long, perfectly straight and square on the edges, so that when driven in their places, and set up with a wedge pile, they shall fit, *butt to butt*, closely and uniformly throughout their entire length. They shall be driven to such a uniform depth as will leave their heads level with the high water mark of spring tides.

The next length of Piling will be driven across the channel, into Fullerton's Cove, marked B on the general plan. It will be also 77 yards long, and similar in all respects to that already described for channel A.

Sections C and C 1, will be respectively 88 yards and 187 yards in length. They shall be driven in the positions shewn at C—C 1 on the general plan, and similar in all other respects to that already specified for section A.

Sections H—H 1, will be respectively 286 yards and 55 yards in length. They are to be constructed across the eastern channel into Fullerton's Cove, at the places indicated on the plan by the letters H—H 1. In all other respects they are to be similar to that already described for section A.

The Piling of section L will be constructed across the narrow channel, running to the eastward of the long sand-bank, in the position indicated by the letter L on the general plan, being 110 yards in length. The top of the sheet piles in this section need only reach to the level of half tide; in all other respects they are to be similar to those already described for section A.

Sections C 2, M 3, and N, are to be driven in the position indicated by those letters on the plan. They will be respectively 176 yards, 176 yards, and 231 yards in length.

The guide piles for these sections shall not be less than 20 feet long and 12 inches diameter, driven at distances of 15 feet apart from centre to centre; they are to be perfectly straight and square on the two sides adjoining the sheet piles. The sheet piles for these sections shall be not less than 15 feet long, 5 inches thick, and 12 inches broad; they are to be driven between wales not less than 12 in. × 6 in., and 16 feet 6 inches long, properly secured to the pile heads by 1 inch wrought iron bolts, with nuts, heads, and washers, as before described.

All the timber used for guide and sheet piles, shall consist of good sound iron bark, spotted or blue gum, or of such other kind as shall be approved by the Engineer to the Harbour Works or his assistant; they shall be perfectly straight, sound in heart, and free from all defects; they must be properly pointed and dressed to a line on the edges, so that they will drive straight and close. If necessary, the heads of the guide piles shall be bound with a wrought iron ring, to prevent them from splitting while being driven; and in all cases both guide and sheet piles, shall be driven to such a depth as to give them a sufficiently firm hold in the bottom. The exact position and direction of each section of Sheet Piling will be marked out in the first instance by the Engineer, to which the Contractor will be bound strictly to adhere, and should he deviate therefrom in the least, he shall be bound, when called on to do so, to take up any portion of the Piling which may have been driven out of the true line, at his own cost, and replace it in the true position. The Contractor shall be also bound to see that any poles or marks which may have been placed by the Engineer, when so laying out the work shall not be injured or removed. The Contractor shall also be bound immediately to remove any materials or workmanship which may be objected to by the Engineer in Chief, or the Resident Engineer, and substitute in its place such materials or workmanship as shall be approved of by the Engineer or his assistant.

The plans, sections, and drawings, represent generally the forms and dimensions of the several works, and are signed by E. O. Moriarty, the Engineer for the Government. When any discrepancy exists between the dimension as indicated by the scale, and the written dimensions and figures, the latter shall be taken as correct; and should there be any discrepancy between the figures or dimensions or form of construction given on the drawings, and the dimensions and descriptions given in this specification, the latter shall be received as correct; and in all cases of ambiguity or insufficient description, in either the drawings or specification, the explanation given by the Engineer shall be considered correct, and shall be binding upon the parties. Any minor parts not included in the drawings or specification, but the intention to include which is obviously necessary for the completion and stability of the works, shall be provided by the Contractor, and are supposed to be included in the sum at which he contracts for the works.

The Contractor shall provide at his own cost all materials, tools, pile engines, machinery and labour of all kinds necessary for the complete carrying out of his contract, and upon its completion he shall remove all surplus materials which might, if allowed to remain, divert or affect the currents of the river.

The Contractor is not in any case to deviate from the specification or dimensions shewn on the accompanying drawings, without written directions to that effect, signed by the Engineer. But if at any time the Government or their Engineer shall direct any changes to be made either in the nature or extent of the works, the Contractor shall be bound to carry out the same, and be paid the extra cost, or allow the consequent deduction, the value of which shall be estimated and agreed upon before such change is made, according to the schedule of prices to be furnished by the Contractor, and in all such cases the change is only to be considered as affecting the object in view and not the contract generally.

The Contractor will be required to give due personal attendance, and in his absence to have some person properly qualified to act responsibly in charge of the work, who will be required at all times, when called upon to do so by the Engineer, to furnish a true return of all labor and materials used upon the works.

Should it appear to the Engineer that the Contractor is not performing his work in a proper manner, or with the requisite expedition, or that he does not comply with the orders to the fullest extent which the Engineer may give from time to time, the Government shall have power to take the work out of his hands, on giving him not less than fourteen days' notice to that effect, paying the fair value of the work actually performed, according to schedule price, less 10 per cent.; the Government may then employ other contractors or workmen to complete the same—the Contractor and his sureties remaining still answerable for any extra sum the work may cost above the contract price.

The Contractor shall state in his tender the sums for which he is willing to contract, for the completion of each section separately, as well as for the whole; he shall also state in schedule the rate per yard run, at which he will contract for the Sheet Piling of 10 feet and of 15 feet in depth, as shewn on the plan, so that any alterations which may be made shall be charged extra or deducted for according to these rates.

The work will be measured by the Engineer at the end of every four weeks, and payments made to the Contractor at the rate of 90 per cent. on the work actually completed, the remaining 10 per cent being retained by the Government, until the work is finally taken off the Contractor's hands, when the balance will be paid him.

The whole of the works herein mentioned are to be completed, in the most substantial manner, within a period of nine months from the date of signing the contract, to the entire satisfaction of the Government and their Engineer, under a penalty of the amount for which the Contractor's sureties are liable, being forfeited.

The Contractor is not to sub-let his contract, or any portion of it, without permission from the Engineer.

The Contractor whose tender shall be accepted, shall provide satisfactory security and sureties, within ten days from the date of its acceptance, for the due performance of the work, and within the time specified.

(Signed) E. O. MORIARTY,  
Engineer to the Hunter River Improvements.

This is the Specification marked with the letter C, referred to in our bond to Her Majesty, dated the 9th day of July, A.D. 1856.

(Signed) J. T. STRONG.

Witness to the signature of John T. Strong,  
(Signed) J. J. LEE.

(Signed) { Wm. WRIGHT.  
                  { JAMES BRYSON.

Witness to the signatures of William Wright  
and James Bryson,  
(Signed) ARCHD. C. INNES,  
Police Magistrate.

[Enclosure 2.]

KNOW ALL MEN by these presents that we, John Tredgold Strong, of Newcastle, in the Colony of New South Wales, William Wright, of Newcastle, in the Colony aforesaid, Contractor, and James Bryson, of Newcastle, in the Colony aforesaid, Engineer, are held and firmly bound unto our Sovereign Lady Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, in the sum of Five Hundred Pounds of good and lawful money of Great Britain, to be paid to our said Lady the Queen, Her Heirs or Successors, to which payment, well and truly to be made, we bind ourselves, and each and every of us, jointly and severally for and in the whole, our and each of our heirs, executors, and administrators, and every of them, firmly by these presents.

Sealed with our Seals, dated the ninth day of July, in the year of our Lord one thousand eight hundred and fifty-six.

WHEREAS the above bounden John Tredgold Strong made the tender hereunto annexed, under the terms and conditions of a notice dated the seventh day of June now last past, and published in the *New South Wales Government Gazette*, of the tenth day of June, (of which notice a copy is also hereunder written) and at the prices, and under the stipulations, in the said tender mentioned or referred to, to provide the materials for and perform the work required in Sheet Piling on the Flats of the River Hunter, according to certain plans and specification,

specification, marked with the letters A, B, and C, and to complete the same in a substantial and workmanlike manner, according to the said plans and specification, within nine months from the date of these presents, for the sum of three thousand six hundred and eleven pounds, seventeen shillings, and the work and materials to be subject to the approval of E. O. Moriarty, or such other person as His Excellency may appoint for that purpose; and whereas the above bounden William Wright and James Bryson have severally agreed to become and be bound to Her Majesty, Her Heirs and Successors, for the due performance and fulfilment of the said tender, within the time mentioned in that behalf, according to the terms and conditions of the said notice; and whereas the said tender has been duly accepted, by His Excellency the Governor General of the said Colony, on condition that this bond should be entered into by them, the said John Tredgold Strong, William Wright, and James Bryson: Now the condition of the above written bond and obligation is such, that if the said John Tredgold Strong, shall, and do well and truly perform, and fulfil the said tender, and the contract arising out of such tender, and the acceptance thereof as aforesaid, and all and every the terms, conditions, and stipulations thereof, within the time hereinbefore in that behalf mentioned, then this obligation to be void and of none effect, otherwise to remain in full force and virtue.

(Signed) { J. T. STRONG, (L.S.)  
 W. WRIGHT, (L.S.)  
 JAMES BRYSON, (L.S.)

Signed, sealed, and delivered by the said John Tredgold Strong, in the presence of

(Signed) J. J. LEE.

Signed, sealed, and delivered by the said William Wright and James Bryson, in the presence of

(Signed) ARCHD. C. INNES,  
 Police Magistrate.

[Enclosure 3.]

Colonial Secretary's Office,  
 Sydney, 7 June, 1856.

TO CONTRACTORS AND OTHERS.

Tenders will be received at this Office until 12 o'clock of Monday, the 23rd instant, from persons willing to contract for the execution of Sheet Piling on the Flats of the River Hunter.

Plans, specification, and all further particulars can be obtained on application at the office of Mr. E. O. Moriarty, Civil Engineer, Mort's Buildings, Pitt-street, Sydney.

Tenders to be endorsed "Tender for Sheet Piling."

Tenders must state the time within which it is proposed to complete the work, and at the foot of every tender there must be a memorandum signed by the party tendering, and two responsible persons as sureties, agreeing to be answerable for the due performance of the contract, in the event of the tender being accepted, and undertaking in that event, that they will severally execute and deliver at the office of the Civil Crown Solicitor, in Sydney, or at the Police Office, Newcastle, within ten days from the usual notification of acceptance, a bond to Her Majesty in the penal sum of £500, for securing such performance, otherwise the tender will not be taken into consideration.

The party tendering, or an agent authorized, in writing, to act for him, is requested to attend at this office at the time appointed for receiving the tenders, to afford such explanation or information as may be required.

(Signed) STUART A. DONALDSON.

(Signed) { J. T. STRONG.  
 WM. WRIGHT.  
 JAMES BRYSON.

Witness to the signature of John T. Strong,  
 (Signed) J. J. LEE.

Witness to the signatures of William Wright  
 and James Bryson,  
 (Signed) ARCHD. C. INNES, Police Magistrate.

[Enclosure 4.]

Newcastle, 20 June, 1856.

SIR,

I hereby offer to execute the Sheet Piling on the Flats of the River Hunter, according to Plan and Specification, at the following rates, viz., sections A, B, C, C 1, H, H 1, L, two pounds three shillings (£2 3s.) per lineal yard, or 880 yards for £1,892; sections C 2, M 3, and N, at two pounds nineteen shillings (£2 19s.) per yard, or 583 yards for £1,719 17s.

I am, &c.,  
 (Signed) J. T. STRONG.

The Honorable  
 The Colonial Secretary.

The gentlemen whose names are given below, have consented to become sureties for the due performance of the work.

(Signed) { WILLIAM WRIGHT, Newcastle.  
 JAMES BRYSON, Newcastle.

[Enclosure

## DEEPENING OF THE RIVER HUNTER.

[Enclosure 5.]

Schedule of Tenders for Sheet Piling, to be constructed in the River Hunter, at the Flats,  
23rd June, 1856.

Name of person Tendering.	Rate per yard lineal of Sheet Piling, 10 ft. in depth.			Rate per yard lineal of Sheet Piling, 15 ft. in depth.			Total amount of Tender for both kinds.	Observations.		
	£	s.	d.	£	s.	d.			£	s.
J. T. Strong.....	2	3	0	2	19	0	3,611	17	0	{ This tender is the lowest, and I think most near what the work will cost.
J. B. Storey and Co. ....	2	10	0	3	5	0	3,965	5	0	
Messrs. Grant and McLean	2	10	0	4	8	0	4,993	0	0	This tender is the highest.

I beg to recommend the acceptance of Mr. J. T. Strong's tender, as being the most reasonable, and the best for the public service.

(Signed) E. O. MORIARTY.

(Signed) GEO. R. NICHOLS,  
26th June, 1856.

1857.

NEW SOUTH WALES.

Legislative Assembly.

DEEPENING THE RIVER HUNTER.

## PROGRESS REPORT

FROM

THE SELECT COMMITTEE

ON

DEEPENING THE RIVER HUNTER;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE

AND

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

20 February, 1857.

SYDNEY:

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

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VOTES No. 37. TUESDAY, 4 NOVEMBER, 1856.

8. Deepening the River Hunter:—Mr. Scott moved, pursuant to notice,—  
(1.) That a Select Committee be appointed to inquire into the present plan proposed, and recently commenced, for deepening the River Hunter, at those parts commonly known as the Flats;—and into all matters connected therewith;—with power to send for persons and papers.  
(2.) That such Committee consist of Mr. Faucett, Mr. Flood, Mr. Parkes, Mr. Jones, Mr. Nichols, Mr. Plunkett, Mr. Osborne, Mr. Weekes, Mr. Arnold, and the Mover.  
Debate ensued.  
Question,—(1.) That a Select Committee be appointed to inquire into the present plan proposed, and recently commenced, for deepening the River Hunter, at those parts commonly known as the Flats;—and into all matters connected therewith;—with power to send for persons and papers,—put and passed.  
Question,—(2.) That such Committee consist of Mr. Faucett, Mr. Flood,\* Mr. Parkes, Mr. Jones, Mr. Nichols,† Mr. Plunkett, Mr. Osborne, Mr. Weekes, Mr. Arnold, and the Mover,—put and passed.

\* Seat declared vacant, 20 December, 1856.

† Seat declared vacant, 27 January, 1857.

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VOTES No. 42. THURSDAY, 13 NOVEMBER, 1856.

11. Deepening the River Hunter:—Mr. Scott moved, pursuant to notice, That all the Correspondence that has passed between the Executive Government and Mr. Moriarty, respecting the deepening of the River Hunter, together with the Plans and Specifications connected therewith, and which Correspondence, Plans, and Specifications were laid upon the Table of this House on the 8th of August last, and ordered to be printed, be referred to the Select Committee appointed to inquire into the proposed plan for deepening the River Hunter.  
Question put and passed.

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VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

19. Shipwrecks at Newcastle:—Mr. Flood moved, pursuant to notice, That the Petition of the Inhabitants of Newcastle, presented by him yesterday, praying inquiry into the recent wrecks in and near the Port of Newcastle, be printed, and referred to the Select Committee on Deepening the River Hunter.  
Question put and passed.  
Ordered to be printed, and referred accordingly.

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VOTES No. 92. FRIDAY, 20 FEBRUARY, 1857.

2. Deepening the River Hunter:—Mr. Scott, as Chairman, brought up a Progress Report from the Select Committee on Deepening the River Hunter, appointed on the 4th November last, together with the Evidence of Mr. Moriarty, and the Minutes of Proceedings of the Committee, in reference to the necessity for the immediate employment of the Dredging Machine, in furtherance of the works now progressing at the River Hunter.  
Ordered to be printed.
-

1857.

## DEEPENING THE RIVER HUNTER.

## PROGRESS REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 4th November, 1856, "to inquire into the present plan proposed and recently commenced for deepening the River Hunter at those parts commonly known as the Flats; and into all matters connected therewith; with powers to send for persons and papers;" and to whom were referred, on the 13th of the same month, "All the Correspondence that has passed between the Executive Government and Mr. Moriarty, respecting the deepening of the River Hunter, together with the Plans and Specifications connected therewith," and, on the 19th of the same month, "The Petition of the Inhabitants of Newcastle, praying inquiry into the recent wrecks in and near the Port of Newcastle";—have agreed to the following Progress Report:—

Your Committee have this day examined Mr. Moriarty, who has just returned from a careful survey and examination of the works in progress, and their effects upon the Channel at the Flats; and your Committee consider this information of such importance as to induce them to draw the immediate attention of this Honorable House to the matter.

The evidence of Mr. Moriarty shews that, owing to the piling operations having been carried on without the assistance of a Dredge, as originally recommended by him, the channel of the River now in use is becoming more tortuous, and is rapidly shoaling; and there is reason to apprehend the entire stoppage of the ordinary traffic of the River, unless steps be immediately taken to prevent such a calamity.

Mr. Moriarty has informed your Committee that but a very small shoal requires removal to render available the new channel, as indicated in his plan, as laid before your Committee; and that such removal could be effected in two or three months, provided the Dredge were at once put into operation.

Your Committee, therefore, strongly recommend that no time should be lost in sending the Dredge down to the Hunter for this purpose.

A. W. SCOTT,  
Chairman.

Legislative Assembly Chamber,  
Sydney, 20 February, 1857.



PROCEEDINGS OF THE COMMITTEE.

FRIDAY, 20 FEBRUARY 1857.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Jones,		Mr. Arnold,
Mr. Weekes,		Mr. Flood,

Mr. *E. O. Moriarty*, Civil Engineer, examined:—

Mr. Moriarty, in the course of his examination, handed in a new plan of the Flats of the River Hunter, prepared by him from soundings taken on the 12th instant.

At the close of Mr. Moriarty's examination, Committee deliberated as to the expediency of at once submitting a Progress Report to the House, stating the necessity which existed for immediately despatching the Steam Dredge to Newcastle for the purpose of removing a small shoal, so as to render available the new channel, now rapidly shoaling, in consequence of the piling operations having been proceeded with without its aid; and, being of opinion that it was decidedly advisable to immediately bring this matter under the notice of the House, requested the Chairman, with a view to accomplish this object, to forthwith draft a Progress Report for their consideration; and the Chairman having drafted such Report;—

Motion made and *Question*,—"That the Draft Progress Report, proposed by the Chairman, be now read"—*agreed to*.

Report read accordingly.

Whereupon motion made and *Question*,—"That this be the Progress Report of the Committee"—*agreed to*.

Chairman requested to report progress to the House, together with the Minutes of Evidence taken *this day*.

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WITNESS.

FRIDAY, 20 FEBRUARY, 1857.

E. O. Moriarty, Esq., Civil Engineer ..... Page. 5

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1857.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

## DEEPENING THE RIVER HUNTER.

FRIDAY, 20 FEBRUARY, 1857.

Present:—

MR. ARNOLD,  
MR. JONES,

MR. WEEKES.

MR. FLOOD,  
MR. SCOTT,

ALEXANDER WALKER SCOTT, ESQUIRE, IN THE CHAIR.

Edward Orpen Moriarty, Esquire, C.E., called in and further examined:—

1. *By the Chairman*: I believe you have been lately on the Hunter, examining the flats? I have.
2. Will you state to the Committee if any alteration has taken place up to this period from your last examination? I find that the channel hitherto used by the steamers seems to have been scoured a great deal in some places, holes, as it were, are scoured out of it, and the sand and matter scoured out of these places seem to have been deposited lower down, where the channel is somewhat wider, and where, consequently, the velocity of the water is less.
3. Is there any alteration in the channel nearer the head of Mosquito Island, from Mosquito Island towards Snapperhole Island? I have not made any soundings, but I do not see there can be much. I do not see that it would be affected at all.
4. Where does this alteration in depth commence? At the north point of Snapperhole Island.
5. *By Mr. Arnold*: Opposite the piling? Opposite the piling. From the piling downwards.
6. *By the Chairman*: Do you find any alteration in the direction of the channel itself? Yes; it is more tortuous, and the bottom seems to be very irregular.
7. Do you find that the course of the channel is approaching nearer the flats on the north-eastern side of Snapperhole Island? It is at the upper end, but it is further from it at the lower end. It seems to be working into the bank. There is nine feet six inches water here (*pointing to the plan*.)
8. Do you think the course of the river will become less or more tortuous in time? More, I think.
9. Will you state the depths of water in the present channel formed recently, compared with that formerly used by the steamers, in the worst places where you find it fill up? There is about five feet six inches of water compared with six feet six inches.
10. Less water? There is a foot less water in some places.
11. So that the course of the river is not only becoming more tortuous, but more shallow? Yes; the sand which has been scoured out of the upper part of the channel seems to have been deposited lower down, making the lower part shallower than it formerly was.
12. The lower portion of the flats, I suppose you mean? Yes.
13. Will you state your opinion now as to what will be the ultimate effect, if no other measures are taken? It is very difficult to say. Water is such an uncertain thing that I defy any man to tell where it will work. If left to itself possibly in the course of years it will cut out a new channel, but I cannot say where it will go. The eastern channel is opening and improving; but at present the effect is to injure the channel now in use; it is not so good as it was.
14. The eastern channel is, I presume, the channel you recommended originally to be adopted? Yes. I find that there is now a greater depth of water throughout this channel, with the exception of a short bar at its lower extremity. The channel is becoming more defined, and the depths are more uniform.

Edw. Orpen  
Moriarty,  
Esq., C. E.

20 Feb., 1857.

- Edw. Orpen  
Moriarty,  
Esq., C. E.  
20 Feb., 1857.
15. Then if no other improvement is to take place, is it your opinion that the channel you recommend would become sufficiently good—without using the dredging machine, say? I think it would in time; but I think before that time arrived the navigation of the river might be seriously affected for the worse.
16. Then you are still of opinion that a dredge is necessary? I am quite of that opinion.
17. How long would it take a dredge to make the channel you consider the proper one effective? Three months, at the outside.
18. With the use of a dredge for three months you would make that a good channel? Yes. It is now a better channel than the other, with the exception of the lower end.
19. *By Mr. Arnold*: What would be the minimum depth of water? Nine feet six inches. I proposed deepening it to ten feet six inches. If the bar were once cut through, it would soon not only widen but deepen itself.
20. *By the Chairman*: Have the bars or shoals, tinted pink in your original plan, been swept away? No, I cannot say there is much difference in them. The water on the upper one is a little deeper, I think. I should like to devote my attention now to cutting through the bar at the lower end. That could be done in three months.
21. Your intention still is to carry on the piling in the various spots indicated in the original plan? Yes.
22. In addition to the piling at the head of Snapperhole Island? Yes.
23. Do you propose to do it with ballast-stone or wood? I should propose to use some stone with the wood where we use it, and to substitute stone altogether for some other portions.
24. Do you intend to protect the piling against the ravages of the cobra? I should do that by dropping the silt which is excavated from the channel.
25. Have you any additional plan to suggest from your recent experience? No, I see no reason to change the scheme I first sent in. In fact, the more I see of it, the more I am convinced it is the best.
26. And had it been adopted, you think the navigation would have been much improved, without being at all impeded? Yes.
27. *By Mr. Jones*: Does it come within your knowledge that the steamers stick more frequently now than they did before you commenced piling? I believe they do; I have heard so from several persons connected with the steamers, and I have seen them stuck there myself; when I was sounding there was one.
28. In your opinion have the effects which have resulted from the piling rendered the new channel, which you pointed out originally, as the most desirable, more necessary? I think so. I think that if we were to set to work to dredge the present channel, it is very likely that as soon as we had dredged it we would find it silt up again. I have no doubt the new channel will be opened in course of time, but, perhaps, not before the other is blocked up.
29. Unless artificial means are resorted to, to open it? Yes.
30. Do you think it is necessary to have a dredge to deepen that new channel without delay? I do. I think the dredge out to go down there at once. The dredge might work in the new channel without in the smallest degree interfering with the navigation of the old channel.
31. Are you apprehensive, if measures are not early taken to deepen the new channel, that the old one will be closed, and the navigation of the river interfered with seriously? I am afraid it will. It seems to have filled up very rapidly of late.
32. Can you give a rough estimate of the probable amount of work necessary to be done in the new channel, to admit of its being used by steamers? Yes; there will be about fourteen thousand tons to be dredged.
33. How long will that require the dredge? Between two and three months; two months if smartly worked.
34. And that would secure an uniform depth of 9 feet 6 inches at low water? Yes.
35. That I think is considerably beyond the average depth of the channel which has existed hitherto? Yes, nearly 3 feet.
36. With that channel deepened to 9 feet 6 inches, there would never be any risk of the steamers now used sticking? Not the smallest.
37. Are you aware whether any steps are about to be taken to send any dredge down there to do the necessary work? I am not; in my original proposition I contemplated getting the Sydney dredge for a time, because I knew we had only a certain sum of money, and we could not afford to spend nine or ten thousand pounds for the purchase of a dredge.
38. *By Mr. Arnold*: What is the rise and fall of the tide in the Hunter at this spot? 4 feet 6 inches, springs, and 2 feet, neaps.
39. *By Mr. Flood*: Do you not think it would be better to have a dredge exclusively for the River Hunter? If we could afford it, it would decidedly be advisable, because I believe a dredge is required on other places besides this.
40. Irrespective of the cost, do you think the trade of the river and port is of so much consequence that it is absolutely necessary to have a dredging machine stationed there? I think there ought to be one.
41. *By Mr. Jones*: Have you brought under the notice of the Government the necessity of measures being taken early to send the dredge down there? I have written a letter to that effect, but I have not sent it in, because I am to see the Secretary for Lands and Works on Saturday. He has written to me for a Report on the subject.
42. You contemplate some steps being taken at an early date to remove the bars in the north-eastern channel? Yes. I have just reported to Mr. Hay that I think it necessary for a dredge to be employed to deepen this channel.
43. *By Mr. Arnold*: Have you any knowledge of any of the shallows in other parts of the river besides the flats? No; my original instructions confined me to the survey of the flats. I believe there are obstructions higher up; but I do not know them of my own knowledge.
44. You do not know whether it is practicable to continue the depth of water you have mentioned

- tioned the whole way up to Morpeth, by means of the dredge? I do not know; but I fancy it could be done.
45. That has been no part of your business? No, I had no instructions on that point. I believe there are only two places where there any serious obstructions.
46. One opposite Mr. Eales', and the other at Raymond Terrace? Yes.
47. Supposing a dredge were permanently stationed on the Hunter, would it not be practicable to excavate a channel of a greater depth than 9 feet 6 inches? I think so; but it would be a large work to endeavour to make it much deeper, because the mean depth of the river is not much greater than that. It is no use attempting to get a greater depth than the mean depth of the river.
48. From what you know of the mean depth of the river, do you think it would be practicable to increase the depth to eleven feet—that is eighteen inches more? I have not sufficient acquaintance with the other parts of the river to be able to say. It could be done on the flats, and I fancy the mean depth of the river is as great as that.
49. *By Mr. Weekes*: Has the silting up of the present channel, which you have spoken of, been owing to the small amount of piling you commenced with? Yes. It has scoured out deep holes in some places, washed the sand down, and deposited it where the channel is wider, and the water loses its velocity.
50. Seeing the effect that small amount of piling has had, do you still adhere to your original recommendations? Yes; I am more firmly convinced of the advisability of them than ever I was. In a sandy river it is no use attempting to keep a tortuous channel; you must straighten it; because the sand is deposited solely by the want of sufficient velocity in the water. If it is taken out there will be a deposit again from the same cause. If the channel is straightened, the current will keep it clear.
51. *By the Chairman*: Were you there during the strength of the ebb-tide? At the end of it, not the strength of it: about an hour before the end of it.
52. Did you observe whether there is much sand or mud carried away by the action of the water of the river? I could not say that.
53. *By Mr. Weekes*: Did there seem to be much sand or other matter held in suspension? I could not see any difference.
54. There was not a particularly cloudy aspect in the water? Nothing unusually so, I think.
55. *By the Chairman*: There is a shallow, or kind of a bar across the river near where the Stockton Factory used to be, but a little higher up—have you heard whether that has increased or decreased? Some say it has increased; others say it has not. Vessels do stick at it, I believe.
56. I asked you a question on your first examination, with reference to your responsibility, in respect to these works, and I wish to repeat it now, because you have had more experience of the action of the water—do you, as a professional man, consider that you would have to bear much of the responsibility, or the entire responsibility, of the failure of the works, as at present carried on, without having the assistance of a dredge and the other appliances you originally recommended? Of course I cannot be responsible for the effect of carrying out half my plan. It is unreasonable to suppose I should be.
57. So that if the channel were to be choked up now, you would not consider your professional character had suffered? In this way I might be considered responsible:—if I considered that only half the work being carried out would prove destructive to the navigation of the river, I do not think I ought to have been a party to its being done. I ought to have said I would have had nothing to do with it if I thought it likely to be injurious.
58. But you consider you have been relieved of a great portion of the responsibility? I do think a great portion of it has been taken off my shoulders by my plan not being entirely carried out; but, at the same time, I cannot say I feel the responsibility entirely removed from me.
59. Supposing your recommendation to have a dredge sent down immediately is not complied with, would you consider yourself then relieved entirely from responsibility? Yes, I think I should. If I make a recommendation and it is not attended to, I think I should be relieved from all responsibility, in consequence of its not being carried out. I believe the piling would of itself do a great deal of good, unassisted with anything else; but I think, in the meantime, until it has effected a cure, there may be some inconvenience felt. I have no doubt there will be a channel formed, but I cannot undertake to say where that channel will go.
60. Seeing that the present channel is working into the flat opposite Snapperhole Island, is it your opinion that it will work into it more and more, and try to force itself between Spectacle Island and Snapperhole Island? I think it will deepen this bend. You will see the sand is now thrown up all the way along here (*pointing to the plan*.) There is now five feet six inches where there was formerly little better than five feet, but it is not uniform; there is nothing like uniformity or regularity about it. The current acts on the bottom wherever the material is soft, and it is carried on until the water loses some of its velocity, and then it is deposited.
61. *By Mr. Weekes*: You do consider yourself responsible in a degree by consenting to undertake a portion only of your plan? Yes.
62. *By Mr. Flood*: I fancy you yielded to the opinion of those who are in power? I yielded to the opinion of those in whose judgment I had more confidence perhaps than in my own.
63. *By Mr. Weekes*: Have you not, in point of fact, put your professional character in danger in deference to the judgment of others? At the time this portion of my plan was sanctioned, I did not feel any degree of apprehension that it would be ultimately injurious to the river; nor do I now.
64. Should this partial execution of your plan prove a failure, will you consider your professional character involved in that failure? I feel a certain degree of responsibility.
65. Have you agreed to a divergence from your original plan, from some strong pressure? No; I have been instructed to carry out a certain portion of it, but it was quite competent to me to say I would not do it, if I thought it would be injurious.

Edw. Orpen  
Moriarty,  
Esq., C. E.

20 Feb., 1857.

- Edw. Orpen  
Moriarty,  
Esq., C. E.  
20 Feb., 1857.
66. Have you communicated to the Government that you would not consider yourself responsible for the effect of this portion of your plan alone? No, I have not.
67. *By Mr. Arnold*: Was it not your design from the commencement that the piling, the action of the water, and the dredging, should all act conjointly? Yes, that was my plan—to open the new channel partly, then go on with the piling, and then continue the dredging and drop the silt about the piling.
68. The object of the dredging would be to throw the force of the water into the particular channel that you desire to adopt? Yes. We always find that the water runs in the deepest channel.
69. But if the action of the water is left to itself it may seek other channels than that which you desire? It may.
70. Then, supposing that by means of this piling the channel is thrown from its present position, if it does not happen to take exactly the course which you desire, when the steam dredge is applied—supposing it is applied at some future time—the new channel which is opened will be prejudicial to the action of the dredge? Yes.
71. That is a reason why the dredge should be immediately set to work? Yes, I think so, in order that the action of the water should be confined to that channel.
72. *By Mr. Weekes*: Does not the course you are now pursuing reverse the order in which you intended to carry out your plan? Yes, with reference to the dredging in some degree it does.
73. *By Mr. Arnold*: Do you know where the steam dredge is employed now? No.
74. *By Mr. Weekes*: According to your original plan you would have first made use of the dredge? Yes; I proposed to form this new channel with the dredge.
75. And then to undertake what you have been instructed to make your first operation—what you have been instructed to make your first operation would, if you had been left to your own judgment, have been the second or the third? It would have gone on simultaneously with the others. Before working with the dredge I proposed closing some of the sections, in order to get a pocket, as it were, in which to throw the silt.
76. Had you been able to carry out your plan in that way, using the dredge at once, you do not apprehend that any of this shallowing of the water would have taken place? I think it would, because as soon as we opened the new channel the old one would have been filled up.
77. But the new one would have been opened before the old one was filled up? Yes.
78. *By Mr. Arnold*: The object of my questions was to show that the immediate application of the dredge would cause a very great saving of labour and inconvenience? Yes; it would save a considerable amount.
79. *By the Chairman*: In case the river should not take your proposed channel, I presume you could assist it very materially, or direct it very materially, by some formation of ballast-stone or piling, at the head of Mosquito Island? I propose to line all this with ballast (*pointing to the plan*.)
80. *By Mr. Arnold*: If the dredge is employed at once, your original plan can be still carried out? Yes; certainly.
81. *By the Chairman*: You think the dredge ought to be sent down without any loss of time? Yes. I intend to report to the Government to that effect.
82. If you have anything further to state, the Committee will be much obliged to you if you will mention it? I do not think there is anything else.

1857.

NEW SOUTH WALES.

*Legislative Assembly.*

.....  
 DEEPENING THE RIVER HUNTER.  
 .....

# FINAL REPORT

FROM

THE SELECT COMMITTEE

ON

## DEEPENING THE RIVER HUNTER;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

### MINUTES OF EVIDENCE

AND

APPENDIX.

---

*ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,*  
 12 March, 1857.

---

SYDNEY:

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
 PHILLIP-STREET.

1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

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VOTES No. 37. TUESDAY, 4 NOVEMBER, 1856.

8. Deepening the River Hunter :—Mr. Scott moved, pursuant to notice,—
- (1.) That a Select Committee be appointed to inquire into the present plan proposed, and recently commenced, for deepening the River Hunter, at those parts commonly known as the Flats ;—and into all matters connected therewith ;—with power to send for persons and papers.
- (2.) That such Committee consist of Mr. Faucett, Mr. Flood, Mr. Parkes, Mr. Jones, Mr. Nichols, Mr. Plunkett, Mr. Osborne, Mr. Weekes, Mr. Arnold, and the Mover.
- Debate ensued.
- Question,—(1.) That a Select Committee be appointed to inquire into the present plan proposed, and recently commenced, for deepening the River Hunter, at those parts commonly known as the Flats ;—and into all matters connected therewith ;—with power to send for persons and papers,—put and passed.
- Question,—(2.) That such Committee consist of Mr. Faucett, Mr. Flood, \*Mr. Parkes, Mr. Jones, Mr. Nichols, †Mr. Plunkett, Mr. Osborne, Mr. Weekes, Mr. Arnold, and the Mover,—put and passed.
- 

VOTES No. 42. THURSDAY, 13 NOVEMBER, 1856.

11. Deepening the River Hunter :—Mr. Scott moved, pursuant to notice, That all the Correspondence that has passed between the Executive Government and Mr. Moriarty, respecting the deepening of the River Hunter, together with the Plans and Specifications connected therewith, and which Correspondence, Plans, and Specifications were laid upon the Table of this House on the 8th of August last, and ordered to be printed, be referred to the Select Committee appointed to inquire into the proposed plan for deepening the River Hunter.
- Question put and passed.
- 

VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

19. Shipwrecks at Newcastle :—Mr. Flood moved, pursuant to notice, That the Petition of the Inhabitants of Newcastle, presented by him yesterday, praying inquiry into the recent wrecks in and near the Port of Newcastle, be printed, and referred to the Select Committee on Deepening the River Hunter.
- Question put and passed.
- Ordered to be printed, and referred accordingly.
- 

VOTES No. 92. FRIDAY, 20 FEBRUARY, 1857.

2. Deepening the River Hunter :—Mr. Scott, as Chairman, brought up a Progress Report from the Select Committee on Deepening the Hunter River, appointed on the 4th November last, together with the Evidence of Mr. Moriarty, and the Minutes of Proceedings of the Committee, in reference to the necessity for the immediate employment of the Dredging Machine, in furtherance of the works now progressing at the River Hunter.
- Ordered to be printed.
- 

VOTES No. 104. THURSDAY, 12 MARCH, 1857.

7. Deepening the River Hunter :—Mr. Scott, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee on Deepening the River Hunter, appointed on the 4th November last.
- Ordered to be printed, together with the accompanying Appendix.
- 

\* Seat declared vacant, 20th December, 1856.

† Seat declared vacant, 27th January, 1857.

1857.

## DEEPENING THE RIVER HUNTER.

## FINAL REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 4th November, 1856, "to inquire into the present plan proposed, and recently commenced, for Deepening the River Hunter at those parts commonly known as the Flats;—and into all matters connected therewith;—with power to send for persons and papers;" and to whom were referred on 13th of the same month, "all the Correspondence that has passed between the Executive Government and Mr. Moriarty respecting the deepening of the River Hunter, together with the plans and specifications connected therewith," and on the 19th of the same month, "the Petition of the Inhabitants of Newcastle, praying inquiry into the recent wrecks in and near the Port of Newcastle," and who, on the 20th ultimo, brought up a "Progress Report, together with the evidence of Mr. Moriarty, and the Minutes of Proceedings of the Committee, in reference to the necessity for the immediate employment of the Dredging Machine, in furtherance of the works now progressing at the River Hunter";—have agreed to the following Final Report.

## DEEPENING THE RIVER HUNTER.

The Witnesses examined in this matter have been Mr. E. O. Moriarty, C. E., Mr. Alexander Bremner, C. E., Mr. James Scott, Mr. J. T. Strong, Mr. Charles Paine, Mr. Alexander Livingstone, Mr. G. B. White, surveyor, and whose evidence (appended hereto) tends to shew that the new channel recommended by Mr. Moriarty to be formed over the Flats should have been carried out by the Executive, and that the Dredge ought to have been employed at the very commencement of the operations, so that by acting simultaneously with the system of piling, the silt raised might have been at once deposited at the foot of this piling, in order to close more effectually the useless channels, and to protect the woodwork itself from injury and decay.

Your Committee, after careful investigation, have found that the witnesses approve and recommend that Mr. Moriarty's plans, as contained in his "general specification of work to be done in clearing and deepening the Hunter River at the Flats," and which specification was transmitted to the Executive by that gentleman on 29th April, 1856, should have been carried out. The propriety of this appears to be borne out by the recent injurious diversion of the stream, caused by the partial adoption of the piling erected between Snapper-hole and Mosquito Islands, which has already the tendency to impede and render more difficult the navigation of the channel hitherto in use, and which circumstance led your Committee to bring up to your Honorable House a Progress Report in order to afford the Government the earliest opportunity of preventing consequences so ruinous to the trade of the whole district.

Your Committee are of opinion that the channel over the Flats should be made as straight as circumstances will permit, and therefore recommend that the Dredge should be immediately used to render the new channel available, in conjunction with the parallel system of piling at the upper estuary of Fullerton Cove, as proposed by Mr. Moriarty; so that the vast body of water contained therein might at ebb tide be forced in a fair and even course direct towards the proposed channel, thereby keeping it free from obstructions, and probably scouring it to an additional depth and width.

The



The Government have stated that measures have already been adopted to carry out with vigour and despatch the original intentions of the Engineer, and that no delay will arise to prevent the accomplishment of the object under consideration. Your Committee deem it unnecessary to enter more fully into the matter, and close with the observation, that in their estimation a grave error was committed by the Executive in relieving the Engineer from any portion of the professional responsibility which should attach to him, by not carrying out the original plan in its integrity, and express a strong recommendation that an efficient Dredge be permanently attached for the sole service and use of the Harbour and River of the Hunter, whose important imports and exports fully justify this recommendation.

#### HARBOUR OF NEWCASTLE AND SHIPWRECKS.

The evidence adduced under this head has satisfied the Committee of the necessity of some absolute and immediate change in the present system of Harbour management, and do recommend that the Harbour and Port of Newcastle, and all matters connected therewith, should be placed under a Local Board, in lieu of the Port Master's Department. And, in order to prevent a recurrence of those lamentable shipwrecks which have occurred at this spot, they urge that a *powerful* Steam Tug should be supplied, and placed entirely under the care and control of this Board, as all the evidence, without exception, proves that the loss of life and property would have been prevented had such a Tug been ready for service.

The Committee, therefore, in strenuously advocating the necessity of a Steam Tug, do so under the belief that this vessel could be easily made self-supporting.

A. W. SCOTT,  
Chairman.

*Legislative Assembly Chamber,  
Sydney, 12 March, 1857.*

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PROCEEDINGS OF THE COMMITTEE.

FRIDAY, 7 NOVEMBER, 1856.

**Members Present:—**

Mr. Scott,		Mr. Jones,
	Mr. Plunkett.	

Mr. Scott was called to the Chair.

The Chairman stated the course which he considered that it would be expedient for the Committee to adopt in prosecuting this inquiry.

Committee having before them a Return to an Order of the Legislative Assembly, dated 3rd June, 1856, for "all Correspondence that has passed between the Executive Government and Mr. Moriarty, respecting the Deepening of the River Hunter, together with the Plans and Specifications connected therewith"—considered the same.

The Chairman read the general Specification of the Engineer, Mr. E. O. Moriarty, as given in page 3 of the above-mentioned Return, and the Schedule, shewing the approximate cost of the proposed Works, appended to the Specification.

Committee then examined the Plan alluded to in the Specification, and deliberated on the various propositions for carrying out the Works set forth therein.

The Chairman read the letter from the Colonial Secretary to E. O. Moriarty, Esq., No. 5 in the Return.

Committee deliberated on the propriety of the course pursued by the Governor General and Executive Council in carrying out a portion only of the Works proposed by Mr. Moriarty.

Motion made (Mr. Jones) and Question—"That E. O. Moriarty, Esquire, Civil Engineer, be summoned before this Committee, as a witness, on Wednesday next"—*agreed to.*  
[Adjourned till Wednesday next, at Eleven o'clock.]

WEDNESDAY, 12 NOVEMBER, 1856.

By direction of the Chairman, the meeting of the Committee to be holden *this day* was postponed until further notice.

THURSDAY, 27 NOVEMBER, 1856.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Nichols,		Mr. Parkes,
Mr. Faucett,		Mr. Weekes,
Mr. Plunkett,		Mr. Flood.

Resolution of the House referring to Committee on 19th instant—the Petition of the Inhabitants of Newcastle, praying inquiry into the recent Wrecks in and near the Port of Newcastle—read.

Petition then read.

The Clerk, by direction of the Chairman, then read the Minutes of Proceedings taken at the former meeting of the Committee.

Mr. E. O. Moriarty, Civil Engineer, examined.

[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY, 2 DECEMBER, 1856.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Plunkett,		Mr. Parkes,
Mr. Weekes,		Mr. Jones,
	Mr. Flood.	

Committee deliberated, and directed that the Plan of the Port of Newcastle and part of the River Hunter, which Mr. E. O. Moriarty had been requested to prepare on a reduced scale from his original Plan, as an appendance to his Evidence, and the Sectional Plan of the River Hunter, shewing the alterations which have taken place in the channel since the commencement of operations therein, given in by Mr. Moriarty during his examination before the Committee, should be lithographed and bound up with such Report as the Committee might hereafter think fit to make.

Mr. *Alexr. Bremner*, Civil Engineer, and Mr. *J. T. Strong*, examined.  
 Motion made and *Question*—"That Mr. *J. Scott* and Captain *Mulhall* be summoned  
 "before this Committee, as witnesses, on Thursday next"—*agreed to*.  
 [Adjourned till Thursday next, at Eleven o'clock.]

THURSDAY, 4 DECEMBER, 1856.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Flood,		Mr. Jones,
Mr. Weekes,		Mr. Arnold,
Mr. Parkes,		Mr. Faucett.

The Clerk, by direction of the Chairman, read the Minute of Proceedings taken at the last meeting of the Committee.

Mr. *James Scott* examined.

The Chairman informed the Committee that Captain *Wm. Mulhall*, who had been personally summoned before the Committee, as a witness, for this day, had neither appeared in answer to such summons, nor assigned any reason for his non-appearance, as requested to do, in case of it being out of his power to attend, under the letter, dated the 2nd instant, addressed to him by the Clerk of the Assembly; and desired the opinion of the Committee as to the most expedient course to be pursued under the circumstances.

Committee considered that, although Captain *Mulhall* ought undoubtedly to have replied to such summons, as requested, in case of his inability to attend the Committee on the day specified, nevertheless, as he might have good and substantial grounds for such non-attendance, they would now recommend that a similar summons be again addressed to Capt. *Mulhall*, and that they should await the result of such summons, prior to taking any further steps in the matter.

The Chairman then read an Estimate received from Mr. *Alexr. Bremner*, Civil Engineer, prepared by him at the request of the Committee, setting forth the expense of making an examination into the rate of the current and condition of the Flats, near the Snapper-hole, in the River Hunter, which Estimate amounted in its sum total to £63 10s., and requested the opinion of the Committee as to the advisability of incurring this expense for such examination.

Committee deliberated.

Motion made (Mr. *Parkes*) and *Question*—"That this Committee are of opinion  
 "there is nothing before them to shew that any real practical good would result from making  
 "this examination, and, therefore, it would be inexpedient to incur an expense so considerable  
 "therefor"—*agreed to*.

The Chairman also laid before the Committee a letter from Mr. *J. Howden*, of Newcastle, condemnatory of the present plan of pile-driving, as carried on under the directions of Mr. *E. O. Moriarty*, in the River Hunter.

Committee deliberated thereon.

Motion made and *Question*—"That A. *Livingstone*, Esq., Harbour Master at New-  
 "castle, and Captains *Mulhall*, *Paine* and *Pattison*, be summoned before this Committee, as  
 "witnesses, on Tuesday next"—*agreed to*.

[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY, 9 DECEMBER, 1856.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Arnold,		Mr. Weekes,
Mr. Jones,		Mr. Faucett,
Mr. Parkes,		Mr. Plunkett.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last meeting of the Committee.

Captain *Paine*, of the "*Illalong*" steamer, Mr. *G. Boyd White*, and Mr. *A. Livingstone*, Harbour Master at Newcastle, examined.

Committee having been informed by the Chairman that the Clerk had not succeeded in serving Captain *Wm. Mulhall* with a second summons, in consequence of his absence from Sydney during the period intervening between the previous and present meeting of the Committee, were of opinion, that as they had now examined Captain *Paine* on this subject, it would be unnecessary to take Captain *Mulhall's* evidence also.

Letter from Captain *Pattison*, of the "*Paterson*" steamer, stating his inability to attend the Committee, as a witness, *this day*, was read by the Chairman; and Committee considered that Captain *Pattison's* evidence would not now be required.

Motion made and *Question*—"That E. O. *Moriarty*, Esquire, be again summoned  
 "before this Committee, as a witness, on Thursday the 18th instant"—*agreed to*.

[Adjourned till Thursday, the 18th instant, at Eleven o'clock.]

THURSDAY,

THURSDAY, 18 DECEMBER, 1856.

**Members Present:—**

A. W. Scott, Esquire, in the Chair

Mr. Jones,		Mr. Plunkett,
Mr. Weekes,		Mr. Osborne.

Mr. E. O. Moriarty further examined.

Committee deliberated.

Motion made (Mr. Jones) and Question,—“That the Chairman do now prepare a  
“Draft Report for the consideration of the Committee”—*agreed to.*  
Committee then adjourned.

THURSDAY, 15 JANUARY, 1857.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Nichols,		Mr. Plunkett.
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The Chairman stated, that he had directed the Committee to be summoned for *this day*, purposing to examine Mr. Bourne Russell, whose evidence he was desirous to obtain, prior to proceeding to draw up a Draft Report; but that Mr. Russell had informed him of his inability to attend as a witness, until to-morrow;—

Whereupon motion made and Question,—“That Bourne Russell, Esquire, be now summoned before this Committee, as a witness, for to-morrow”—*agreed to.*  
[Adjourned till to-morrow, at Eleven o'clock.]

FRIDAY, 16 JANUARY, 1857.

**Member Present:—**

Mr. Arnold.

Mr. Bourne Russell was in attendance, as a witness; but a quorum of members not being present, no meeting of the Committee was holden *this day.*

FRIDAY, 20 FEBRUARY, 1857.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Jones,		Mr. Arnold,
Mr. Weekes,		Mr. Flood.

Mr. E. O. Moriarty, further examined.

Mr. Moriarty, in the course of his examination, handed in a new plan of the Flats of the River Hunter, prepared by him from soundings taken on the 12th instant.

At the close of Mr. Moriarty's examination, Committee deliberated as to the expediency of at once submitting a Progress Report to the House, stating the necessity which existed for immediately despatching the Steam Dredge to Newcastle for the purpose of removing a small shoal, so as to render available the new channel, now rapidly shoaling in consequence of the piling operations having been proceeded with without its aid; and, being of opinion that it was decidedly advisable to immediately bring this matter under the notice of the House, requested the Chairman, with a view to accomplish this object, to forthwith draft a Progress Report for their consideration; and the Chairman having drafted such Report;—

Motion made and Question,—“That the Draft Progress Report, proposed by the  
“Chairman, be now read”—*agreed to.*

Report read accordingly.

Whereupon motion made and Question,—“That this be the Progress Report of the  
“Committee”—*agreed to.*

Chairman requested to report progress to the House, together with the Minutes of Evidence taken *this day.*

TUESDAY, 24 FEBRUARY, 1857.

**Members Present:—**

A. W. Scott, Esquire, in the Chair.

Mr. Jones,		Mr. Arnold,
Mr. Weekes,		Mr. Flood.

The Chairman stated that he had requested the attendance of two witnesses, Mr. Moriarty and Mr. John Bingle, for the purpose of examining them relative to the Petition respecting shipwrecks at Newcastle, referred for the consideration of the Committee on the 19th November last.

Mr. Merion Moriarty, Portmaster, examined.

A letter from Mr. *John Bingle*, Chairman of the Newcastle Chamber of Commerce, excusing his attendance before the Committee, as a witness, *this day*, read ;—

Whereupon motion made and *Question*,—“That Captain Rountree and A. Livingstone, Esquire, be summoned before this Committee, as witnesses, for Friday next”—*agreed to*.

[Adjourned till Friday next, at Eleven o'clock.]

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FRIDAY, 27 FEBRUARY, 1857.

**Members Present :—**

A. W. Scott, Esq., in the Chair,  
 Mr. Arnold, | Mr. Flood,  
 Mr. Jones.

Mr. *A. Livingstone* further examined.

Captain *Rountree* examined.

Motion made, and *Question*—“That Charles Bolton, Esquire, and Mr. John Hannell be summoned before this Committee, as witnesses, for Wednesday next”—*agreed to*.

[Adjourned till Wednesday next, at Eleven o'clock.]

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WEDNESDAY, 4 MARCH, 1857.

**Members Present :—**

A. W. Scott, Esquire, in the Chair.  
 Mr. Jones, | Mr. Flood.

Mr. *Charles Bolton*, Sub-Collector of Customs at Newcastle, and Mr. *John Bingle*, Chairman of the Newcastle Chamber of Commerce, examined.

Motion made (Mr. *Jones*) and *Question*—“That the Chairman now prepare a Draft Final Report for the consideration of the Committee”—*agreed to*.

[Adjourned till Thursday, 12th instant, at Eleven o'clock.]

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THURSDAY, 12 MARCH, 1857.

**Members Present :—**

A. W. Scott, Esquire, in the Chair.  
 Mr. Jones, | Mr. Flood,  
 Mr. Weekes, | Mr. Arnold.

Letter from Mr. John Hannell, stating his reasons for non-attendance on the 4th instant, in compliance with the summons addressed to him, read.

Committee considered Mr. Hannell's explanation, as given therein, satisfactory.

The Chairman brought up and laid before the Committee a Draft Final Report.

Motion made and *Question*—“That the Draft Final Report proposed by the Chairman be now read 1<sup>st</sup>”—*agreed to*.

Report read 1<sup>st</sup> accordingly.

Committee deliberated.

Motion made (Mr. *Jones*) and *Question*—“That this Draft Report be now read 2<sup>d</sup>, and considered paragraph by paragraph”—*agreed to*.

Paragraphs 1, 2, 3, 4, 5, 6, and 7 read, and, with certain verbal amendments, agreed to.

Whereupon Motion made and *Question*—“That this be the Final Report of the Committee”—*agreed to*.

Chairman requested to report to the House, together with the Minutes of Evidence.

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## PETITION—SHIPWRECKS AT NEWCASTLE.

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1856.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

## DEEPENING OF THE RIVER HUNTER.

THURSDAY, 27 NOVEMBER, 1856.

Present:—

MR. FAUCETT,	MR. PLUNKETT,
MR. FLOOD,	MR. NICHOLS,
MR. PARKES,	MR. SCOTT,
MR. WEEKES.	

A. W. SCOTT, ESQUIRE, IN THE CHAIR.

Edward Orpen Moriarty, Esq., C. E., called in and examined:—

1. *By the Chairman*: You are by profession a Civil Engineer? I am.
2. You were required by the Government to make a report upon the deepening of the Hunter at those points known as the Flats? Yes.
3. Do you produce a plan of the river, shewing the alterations you proposed to make in the channel, and the works to be carried out with that view? I do. (*The Witness handed in the same. Vide Appendix A.*)
4. Have you seen these printed papers, supposed to contain the correspondence between yourself and the Government, and your report? No, I cannot say I have seen them in print.
5. Will you look over them, and say whether we can assume that they are correct? I believe they are all right; I see nothing to lead me to suppose they are not complete; but, of course, I cannot speak positively without comparing them with the copies I have.
6. You have been lately down to the Hunter? Yes; I was down on Saturday last.
7. Examining the works now in progress? Yes.
8. What is your opinion now, with respect to the recommendations that you originally gave in—has your opinion been altered or confirmed with respect to the propriety of these recommendations? I have had no reason to alter my opinion, with this exception, that we shall find in future stone ballast to be cheaper than timber piles.
9. You recommended certain dredging to be done, without reference to the materials at all? I did, and I see no reason to change the view I first formed in that respect.
10. Your original recommendations you consider ought to have been carried out, from what you now see? I believe so. I have no reason, whatever, to change my mind on the matter.
11. *By Mr. Plunkett*: Are the works being carried on as you originally recommended them to be carried on? No. I recommended that certain points, tinted pink on the plan, between D and G, should be dredged simultaneously with, or a little before, closing the channels which I intended to stop up, in order to give the river a fair sweep from the point marked F on the plan to the point marked G; in fact to straighten the course of the river as much as possible.
12. Was that recommendation acted on? The piling for the purpose of diverting the current has been sanctioned, but the dredging has been postponed.
13. Was the dredging a necessary part of your design? It was part of it.
14. Is your design being carried out to your satisfaction? I cannot say it is; I should like to have the dredge down there now.
15. *By the Chairman*: In your general specification of the work to be done you recommend as follows:—"4th. As soon as the new channel, above described, has been opened to the required depth of say 10 feet at low-water, we may then commence to close the upper ends of the branch channels, between the Long Bank and the mainland on the east, and between

E. O. Moriarty  
Esq.

27 Nov., 1856.

E.O. Moriarty Esq.  
27 Nov., 1856.

" Snapper-hole and Ash Islands on the west, by rows of sheet piling, placed in the positions marked L and N." I believe your original plan was that the dredge should be first in operation? Yes, it was; but I intended to have closed some of the minor channels first, in order to get still water recesses in which to drop the silt.

16. Have you had any reason to change that opinion? No; I have not.

17. Your reason for wishing to dredge was that the force of the current should be directed in a straighter channel instead of the present tortuous one? Yes; I wanted to straighten the channel to avoid that bend, as by so doing the tidal water would have ascended the river more freely, so that there would be a greater body of water to act on the bottom.

18. Will you give some reasons for that proposal, as regards tidal influences and currents? By straightening it the distance between the points F and G on the plan is considerably shortened, and, therefore, whatever fall is due to that distance on the river will be increased, and consequently the velocity of the waters will be accelerated.

19. And the strength of the current thereby increased? Yes; the difference of level, being divided by the shorter distance, gives a greater ratio of inclination.

20. Will it have any effect as regards keeping the channel clear afterwards? I think so—a great deal.

21. Do not steamers and other vessels experience as much difficulty from the tortuous nature of the present channel on the flats, as they do from the shoalness of the water? I have been told so. I have spoken to most of the Masters on the subject, and they say they have found the greatest difficulty on that account; their vessels smell the ground, as they express it—they cannot steer them very well.

22. On account of the shallowness of the water, and the tortuous channel? Yes.

23. As much the one as the other? Yes; they won't steer well, because of the shoalness of the water, and that makes it more difficult to get round those sharp bends.

24. If you dredged the course you propose, that difficulty would be entirely done away with? Yes; I think it would.

25. *By Mr. Faucett*: Do these flats that you wish to dredge appear above water at low tide? No; there is 6 or 7 feet water on them.

26. *By the Chairman*: What effect has the sheet piling you are now putting up at the head of Snapper-hole Island had upon the current of the river? It diverts it nearly all into the present channel. This is fully proved by the fact that the water is 6 to 7 inches higher on the up channel side of the piling than on the lower during ebb-tide; there is scarcely any difference of level (not 1 inch) during flood-tide.

27. Where will the water strike with the greatest force? It strikes on the bank at the north-east point of Snapper-hole Island.

28. If I understand you correctly, it strikes with some force on that bank? Yes, and it is then diverted across to the Long Mud Bank. The tendency of the water is to wear into that mud-bank.

29. What will be the ultimate effect of that in the course of years? To make a deeper bend.

30. Will it not have the effect, in the end, of going right through that bank? It may have that effect in course of time. I think it will work into the mud-flat, and deepen the bend.

31. The bend will be increased? Yes.

32. Therefore, instead of having a straighter channel, it will ultimately be a more tortuous one? Yes.

33. Do you think that the present work is at all likely to stand? I hope so.

34. Without any further assistance? I hope so after it shall have been finished.

35. Just as it was originally planned? No, I do not think it would, as originally planned, unless the silt and mud taken up by the dredge had been dropped about them, and this the addition of a few fascines, or a little ballast, as I suggested in my first report, would have been quite sufficient.

36. What would you recommend to make it effectual? I have dropped a lot of ballast along the foot of the piles. The channel at N is closed now, at the head of Snapper-hole Island.

37. You are now obliged to drop ballast to protect the sheet piling? Yes.

38. What is the expense of that ballast? Three shillings a ton.

39. Thrown into position? Thrown into position.

40. How many tons do you think you will require to do the work effectually? About four hundred tons.\*

41. Then you think that for sixty or seventy pounds you will make this particular sheet piling we are now speaking of efficient? We had great difficulty in executing this part of the work, because the bottom is a quicksand. One portion of the work which was left enclosed from Saturday night to Monday morning, was found to be scoured away to the depth of seven feet.

42. You think you will only require four hundred tons of common ballast to stop all that? I am in hopes four hundred tons will be enough.

43. *By Mr. Plunkett*: Will that permanently secure the piling? I think so. We only want to protect the bottom from being washed away from it.

44. *By the Chairman*: Have you finished any other sheet piling in any other direction? No, this is the only portion that has been done.

45. What has been the effect of the recent freshes upon the places where you propose to place piling at M? I cannot observe any change there. I did not look very closely at it, to say the truth.

46. I wish to know whether you think that if that sheet piling is finished at M, it will require ballast to protect it? I think it will.

47.

\* I have made a mistake here. I find that 650 tons have been deposited, and I fear we shall require more, say 850, much more.



47. What will be the additional expense of that? I have proposed to the Minister of Public Works to substitute ballast entirely, instead of sheet piling. E.O. Moriarty Esq.
48. What will be the difference of expense? I do not think there will be any increase. If there is a difference, I think it will be in favour of ballast. When I first made inquiries on the subject I could get no offers for ballast for less than six shillings a ton; they were charging four shillings for moving coals in the harbour of Newcastle, and they said that if I wanted stone up there at the Flats, I could not get it for less than six shillings. I am now getting it for three shillings, and on that account I think it will come cheaper than the piling, and it will certainly be more permanent. The high price of the ballast, and the apparent cheapness of the piling as compared with it, were my reasons for recommending that the latter should be used. I now find, however, that the bottom is not sufficiently strong to give the piles a firm hold, and to resist the action of the water; I have therefore proposed to substitute stone ballast for those places which are accessible to a loaded barge. 27 Nov., 1856.
49. In the event of these barriers being erected as proposed, and if the present tortuous channel is persevered in, do you think it is likely, from your knowledge of the tidal influences and currents, that there will be new channels formed over the mud-flats between Snapper-hole Island and Mosquito Island, (or Ash Island, as you have called it there,) and the various small islands that we call the Mangrove Islands? I do not think it would affect them much, that is supposing the waters coming out of Fullerton's Cove, were directed as is proposed. I think the only effect of continuing this tortuous channel will be, to cause the water to act on the north-eastern portion of Snapper-hole Island, and on the western edge of the long bank, and to enlarge the curve of the present channel.
50. You were down at the Hunter during the fresh, were you not? Yes.
51. Was the water fully as high as the highest spring tides? I cannot say positively; it was very close to it.
52. Were these flats covered? Yes.
53. How did the tide take? It ran in the main channel.
54. *By Mr. Faucett:* Supposing these dams to be substantially made, and to be permanent, would the tide running up between Snapper-hole Island and Ash or Mosquito Island make a passage towards the north, or would these curved lines that you have marked pink, running into the islands between Snapper-hole Island and Mosquito Island, would the water running in that direction make a passage in that way: in other words, would there be a passage made from the upper to the lower part of the river, between Snapper-hole Island and Ash Island, by the tidal influences or the influences of the current? I think it will have the effect of enlarging the passages already shewn, unless the sectional area of the river below them is increased by dredging or other ways, so as to let the water get freely away, but the currents indicated by these red lines, are caused by the body of water coming out from Fullerton Cove, and striking on the current coming down from the Hunter. Here is one line representing the velocity and direction of the water from the Hunter, and the other the velocity and direction of the water from Fullerton Cove. Any tendency to enlarge the present channels about M, may be easily checked by dropping a border of ballast along the edge of the bank, which would be sufficient to protect it without impeding the upward passage of the flood waters.
55. Would the result of the two forces, that running between the pink lines from above the letter E, and that running from Fullerton Cove, meeting together at the banks marked M 1, M 2, M 3, would the resultant of these several forces form a channel between Snapper-hole Island and Mosquito or Ash Island? They would, if the current out of Fullerton Cove were allowed to continue in its present course.
56. Would that current, from the resultant of these two forces, along with the tidal forces, in the course of any short period, form a channel navigable by ships of any considerable size? I do not think it would, because there is a bar in the Ash Island channel, and the effect of the ebb currents down the river is to extend the bank from M, on towards the head of Snapper-hole Island. If the currents were allowed to continue in their present course, the effect no doubt would be to drive a great body of water down at the point marked N, between Snapper-hole Island and Ash Island, or Mosquito Island, as it is more properly called.
57. Then, considering the entire plan, without regard to the expense, which would be the more desirable channel, as a new channel, the channel between Snapper-hole Island and Ash Island, or the channel now proposed? I believe the channel I have proposed. It possesses one great advantage over the other, from the circumstances that most of the flood waters pass up it.
58. *By the Chairman:* Do you know whether it is the intention of the Government to put the sheet piling at the points marked M, M1, M3, and L? That is the plan as at present decided on; but I have reported that I prefer using ballast.
59. Have you contracted for the sheet piling? Yes.
60. Have you paid for it? Only for that which has been properly executed, and which appears likely to stand well.
61. Can you stop it? I have put a clause in the specification to the effect that the Government can take the contract out of the contractor's hands, on giving him fourteen days' notice to that effect; also that the Government can diminish, alter, or increase its amount of work without any compensation. The contractor should have confined himself to getting the piling for the section we are at work upon. He has dropped piling at other places; but that will be at his own risk.
62. You think the work can be done at as cheap a rate with ballast as with sheet piling? I believe it can.
63. Have you made any calculations with the view of ascertaining that? I have.
64. With respect to your own proposal, to come back to that, if the dredging had been carried out as you suggested at first, do you not think it would have been a permanent and effectual job? Yes.

- E.O. Moriarty Esq.  
27 Nov., 1856.
65. Are you clearly of that opinion? I am satisfied of that. There would have been scarcely any tendency to alteration in the channel from this gentle curve. It is a well ascertained fact that obstruction to the passage of the tidal wave up a river arises as much from the tortuous nature of the channel as from the shallowness of it.
66. Do you not consider that if that plan of yours, as to the dredging, had been carried out, it would have thrown nearly the whole strength of the river Hunter into the new channel, and taken it away from those you are now piling? I think it would; it would have eased their work at N a good deal.
67. And if so, would not the sheet piling you intended to put up have stood without ballast, that is to say if the dredging, according to your plan, had been carried out to the full extent, and the force of the current directed into your channel, would the sheet piling have been sufficiently strong? It would have had a much better chance; but I do not think, from what I have seen, that it would be sufficient in any case, unless the silt taken up by the dredge had been dropped about it. You cannot make the piles perfectly close, and even if there is a quarter of an inch between them, the constant action of the water cuts out a little circle round the orifice, and gradually undermines the whole. If the bottom had been clay or gravel, it would have been sufficient without ballast; but it is a quicksand.
68. During your recent visit to the Hunter, you took several sections of the river? Yes, three.
69. Will you produce them? I will. (*The Witness handed in the same. Vide appendix B.*)
70. These sections include both channels, that is, the one you propose to make, and the one now in use? Yes.
71. Did you find any difference in the depth of water since the fresh? I found a difference of over a foot in some places.
72. Did you find that the channel now used by the steamers was deepened? It is deepened in some places, in others it is a little shallower, shewing that the channel is altering.
73. Did you also find that the new channel from which you propose to remove the obstructions was deepened? I did.
74. Which was deepened the most, the present tortuous channel or the one that you suggest ought to be made? The tortuous channel, I think.
75. Is there much difference between them, taking one place with another? No; the water will not open the new channel to any extent until the bar is removed from the head of it. Until that is dredged the water will not act with full force. The almost invariable practice in river engineering is first to form the channel it is desired to open, by dredging, and then by confining the tidal action to this channel, trust to it to maintain a sufficient depth of water.
76. Those sections were taken by you since the completion of the sheet piling you have been putting up? It was nearly completed.
77. How long after? They were taken on Saturday last.
78. When was the sheet piling finished? On Tuesday.
79. These were taken on the preceding Saturday? Yes.
80. Do you attribute the increased depth of either of these channels to the common tidal influences, or the ordinary current of the river, or to the late flood? It was principally owing to the flood. But it must be borne in mind that the flood was made to come down the present channel, in consequence of the channel at N being in a great measure closed. At the time it was more than half closed.
81. If your original plan had been carried out, what effect do you think this large body of water coming down would have had upon the new channel you propose? It would have opened it to a very much greater extent.
82. The spots tinted pink on the plan are the parts you wish to have dredged? Yes.
83. Will you state to the Committee what amount of work is required to be done by the dredge there? The quantities are marked on the plan—63,434 cubic yards from the upper one, 43,033 cubic yards from the centre one, and 59,102 cubic yards from the lower one.
84. Was there any vast amount of work to be done which would have occupied any great length of time? No, I think not; a dredge in active work could take up four hundred tons a day.
85. You know the present dredge? Yes.
86. Is that capable of doing the work? Yes, in course of time, but it is not a very good one.
87. Has the Government more than one dredge? No.
88. Is that dredge in any employment now? I believe so.
89. Could it have been spared for the Hunter? I do not know.
90. Do you know what would be the cost of an improved dredge, for such a purpose as we require it, for the Hunter? For about nine or ten thousand pounds you could get a very good dredge.
91. It is nine months since you sent in your general specification? Yes, I think so.
92. In nine months would there have been time, or nearly time, to have had a dredge from England? No, not in nine months; it would take about fourteen months to get a dredge out; I think you might have a dredge in operation here in fourteen or fifteen months after the order was given for it.
93. With reference to that channel which we will call Mosquito Island Channel, you have been in it—have you not? Yes, frequently.
94. Have you observed on the eastern bank of it the habitations of various settlers? I have.
95. I do not know whether you are aware that those settlers purchased that land and gave high prices to the Government for it, on purpose to have the advantage of that water frontage? I am not aware of that; but they do not seem to object to the closing of the channel, because a good many of them are at work on the works.
96. If a settler residing on what you have called Ash Island, somewhere about where I see  
the

the letter I of the word "Island" on the map, wished to go up the river, how would he go after that channel is stopped at the points marked N and M? He would have to go round Snapper-hole Island. E.O. Moriarty  
Esq.

97. What difference of distance would that make to him? About six miles. 27 Nov., 1856.

98. *By Mr. Parkes*: What is the distance on the river occupied by your proposed new channel? A mile and a half; but the dredging will only be required at the places tinted pink.

99. How far is it from Newcastle to the commencement of it? About four miles and a half.

100. *By Mr. Flood*: Would it not be a great advantage to you if you had the Dredging Machine on the spot? Very great.

101. If you had a Dredging Machine on the spot where would you deposit the debris or silt? I would put it in what I may call the pocket of the channels we are closing.

102. *By the Chairman*: Did the Government give you any instructions respecting leaving an outlet for the benefit of the settlers on Mosquito Island? None.

103. If they had, could you have so contrived it as to leave an outlet, without involving any very great expense or any vast amount of engineering skill? Yes, I could have done it easily.

104. *By Mr. Faucett*: Could you have left such a channel without interfering with the plan you propose? I think so; I do not think there would be any difficulty in leaving a small break there, about forty feet wide and ten feet deep.

105. *By the Chairman*: That is if your plan that you proposed had been carried out in its integrity? Not if it had been fully carried out. There would have been no channel then, as I proposed closing it altogether and depositing the silt in it which had been dredged out of the other places.

106. Supposing the Government had told you that these settlers had a right of passage, could you have left them an outlet, provided the other portions of your plan had been carried out? Before answering that question I should like to know what the accommodation required by these people is.

107. They would require accommodation for a punt or barge? They could get over all this flat (*pointing to the plan*) at high water with a boat or light barge.

108. *By Mr. Faucett*: Could this channel that you propose be properly carried out without closing up that opening at N entirely? I think not; I think it is essential to keeping the river clear to close all these channels.

109. It is, in fact, the principle of your plan to close up these channels? Yes; because it is in consequence of the tide being divided into all these channels that there is not sufficient water to keep the main channel clear.

110. *By Mr. Plunkett*: Did you ever hear any of these people the Chairman alludes to complain of your stopping up this channel at N? I never heard any objections to it, and I know there are some of them working at it. May I ask what is the amount of accommodation required?

111. *By the Chairman*: Merely for boats and barges? Then it would have been a very simple matter, no doubt.

112. Would it have interfered with your plan? Not for a boat.

113. *By Mr. Parkes*: Could a boat passage have been left there without injuring the stability of the work, whichever channel might have been adopted? I think so. A boat can come through the parts marked M at present.

114. *By Mr. Flood*: Have you estimated the cost of removing these banks tinted pink on the plan? I have.

115. What would it amount to? About £12,417.

116. Does that amount include the cost of the Dredging Machine? The entire cost. I estimated it at so much per yard, which is the usual way of doing these things, taking it for granted that we should have the Dredging Machine from Sydney.

117. You did not contemplate the purchase of a new Dredge? No. I knew we had only £40,000 with which to do a good deal of work at the Flats, the Wharfs at Newcastle, and the Breakwater, and I did not think £10,000 could be spared out of it for a new Dredge.

118. *By the Chairman*: If your plan had been carried out in its integrity, and had failed, would you have held yourself responsible for that failure professionally? Yes, clearly.

119. But supposing that your plan is not adopted as a whole—if the works you suggest should be first undertaken are totally neglected, and another portion of your plan which you consider of secondary importance is commenced, and that fails,—do you feel yourself responsible then? I consider myself responsible for carrying out the work which has been authorized properly, but I do not consider myself responsible for the ultimate effect of that portion of my plan only.

120. Supposing the works themselves are perfectly well executed, but that they fail in the intended improvement of the channel, would you consider yourself responsible for that result, your chief recommendations not having been adopted? Of course it takes off some responsibility from me; but at the same time, I feel that even the portion which has been authorized will produce a certain amount of good, though I believe if my first plan had been carried out it would have produced a greater amount of good.

121. *By Mr. Faucett*: It simply comes to this, that you do not feel your professional character involved to so large an extent at present, on account of the works not being carried out as you originally proposed, as you would have done if they had been so carried out? Of course not, but I believe the effect of the works now being carried out will be to deepen the present channel.

122. *By Mr. Plunkett*: Do you consider that in carrying out the works you are at present employed upon, you are carrying out the plans of the Governor and Executive Council, or your own original design? I am carrying out the orders of the Government, and not acting on my original design. I am in fact carrying out one-half of my original design.

- E.O. Moriarty  
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123. You divided your recommendations into three parts—did you look upon these as a whole, or could they be separated, and one part be taken up and another part be allowed to stand by? No doubt they could; but one part only having been carried out, has increased the difficulty of carrying out the other.
124. I see it stated in the letter of the Colonial Secretary to you, of the 27th May, 1856, that, "fortified by the opinion of the Governor General, who has personally examined the locality, the Council advised that the work indicated in the two first sub-divisions should be deferred for the present, but that the piling should be at once proceeded with, except at the spot marked K on the plan;" now taking it up in that way, do you think it interferes with your original design? No doubt it does. It is carrying out only part of my original design.
125. Can your design be carried out afterwards? It can; but I would have preferred reversing the order, as it would have much facilitated the closing of those branch channels.
126. *By the Chairman:* With additional expense? I do not know that, taken as a whole; for although it has, perhaps, rendered the piling more expensive, still a good deal of silt has already been scoured away, which would have been taken up by the dredge otherwise.
127. *By Mr. Plunkett:* The two parts laid aside would cost, according to your estimate, £7,660 and £4,757 respectively, so I fancy it was on the ground of expense that the Government deferred them? I fancy so. I think there can be little doubt about the engineering propriety of the plan.
128. The work you are going on with will not be thrown away? No.
129. *By Mr. Faucett:* Your plan was to excavate these sand banks to deepen your proposed new channel at the same time, or almost simultaneously with, the closing up of the small channels? Yes.
130. *By the Chairman:* I beg to call your attention to your own report. You say in words: "As soon as the new channel, above described has been opened to the required depth of say 10 feet at low water, we may then commence to close the upper ends of the branch channels;" therefore it does not appear that you intended to carry on the two simultaneously? I should have commenced them simultaneously, closing the channels H and I simultaneously with the dredging, in order to have a still recess in which to deposit the silt, otherwise it would be washed back upon us; and when the new channel was well opened, I would then have closed the sections N and L, and put the remainder of the silt taken from the new channels about the piling in them.
131. *By Mr. Flood:* Could you not have deposited the debris from the dredging at N without the piling? No; I should not like to do it without the piling, because the flood coming up would be very likely to wash it back. I think it would be necessary to have a dredge even if this the present channel is to be adopted, because the tidal influence is so irregular, that it will be necessary to correct it in some degree by dredging those spots where the ground being harder resists the action of the water in a greater degree than where it is soft mud or sand.
132. *By Mr. Plunkett:* When the piling at present authorized is completed, how much do you calculate the present channel will be deepened? I think it will deepen it a couple of feet in most places; but I doubt whether it will deepen it to be of very much use without dredging, because of the hardness of some portions of the bottom, and the consequent want of uniformity.
133. You mean that it will not be deepened all through? Not uniformly deepened. It will be deepened in those parts where the bottom is softer.
134. Then vessels going up may still meet with the obstructions they do now? Yes, decidedly.
135. *By the Chairman:* I understood you to say that it would be the means of improving the old channel? Yes, deepening it.
136. But I think you said the channel will be more tortuous on account of the current wearing away the bank? That may be; but it will not work into that bank for some time.
137. *By Mr. Faucett:* Would the new channel you propose be more uniformly deepened than the present channel? I propose to make it uniform by means of the dredge, and having made it so once, the tidal action would always keep it so.
138. What would be the difference in depth between the present channel, and the one you propose, if your plan were carried out in its integrity? About three feet.
139. *By the Chairman:* In favour of your channel? Yes. The proposed new channel is now the deepest, with the exception of a small bar.
140. What is the extent of that bar? About five hundred yards.
141. How long would the present dredging machine take to remove the whole of that? About four hundred and ten working days. I am supposing that the whole of it should be cleared away; but if we did only a part of it, it might be done in three or four months, and would be attended with great advantage, because if we could once get the water running that way, it would help to deepen it.
142. *By Mr. Faucett:* How many vessels could pass readily abreast in the new channel? Four or five.
143. *By the Chairman:* Supposing it were found that the portion of your plan that is now being carried out, was acting badly after a year or two, if it were found that instead of deepening the channel it was only obstructing it, and you heard anybody remarking upon it, and saying, "Oh! that is Mr. Moriarty's plan," would you feel that it was just to blame you for the bad result? No, I should not.
144. Then you do not reckon yourself responsible for the consequences of the steps that are now being taken? No, not altogether; but I cannot say that I am free from responsibility.
145. In the other case, the whole responsibility would have attached to you? Yes.
146. Whereas, under present circumstances, the Executive have taken the responsibility of the ultimate effect upon themselves? No doubt they have to a certain extent.

147. *By Mr. Weekes*: This letter from Mr. Elyard seems to adopt your plan, suggesting, however, that you should begin at the third proposition first, but not deviating from your plan in any way? Just so. I do not know that the Government intended to abandon the rest of the plan finally. I think they have adopted the part they thought most likely to produce an immediate effect. They probably thought, that by the expenditure of some thousands of pounds on this portion of the work they would have the benefit of a greater depth in the old channel with the least possible delay.

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148. What you are now doing is still a part of your plan, only reversing the order in which you would have commenced it? Yes.

149. The other parts can be followed out at any time? Yes. There has been no change in my plan whatever, only that they have taken one part of it up without the rest, and have ordered that to be gone on with.

150. *By the Chairman*: Since you sent in your plan, some nine months ago, I think there would have been time to have cleared a good deal of these flats if the Dredging Machine had been put on at once? Yes, certainly.

151. Supposing that the Government had the money at their disposal, and again called upon you to make another report, would you or would you not recommend the very same plans in their integrity as you have already recommended, to secure the effectual navigation of the Hunter at these points? Yes. I would in that case recommend that the Dredge should be immediately employed, in order to carry out these plans in their integrity, with the exception, as I have said, of the substitution of ballast for sheet piling.

152. Then the Government have directed you to pursue a course which on your own judgment you would not have done? No; I should have gone on with the dredging at the same time, and the stuff we would have got from the dredging would have settled about the piling, and protected it from the insects, cobra, and so on, and have eventually formed banks where the channels now run. Hereafter, I believe, we shall find it necessary to fix the banks, and prevent alterations in the channel over the flats, by laying borders of fascines, or ballast on each side of the river; but as that is a matter for future consideration I have not thought it necessary to go into it when considering the plan for deepening the channel, which is the work to be first undertaken.

TUESDAY, 2 DECEMBER, 1856.

Present:—

MR. FLOOD,  
MR. JONES,  
MR. PARKES,

MR. PLUNKETT,  
MR. SCOTT,  
MR. WEEKES.

A. W. SCOTT, ESQUIRE, IN THE CHAIR.

Alexander Bremner, Esq., C. E., called in and examined:—

1. *By the Chairman*: I believe you are a Civil Engineer by profession? Yes, I am a Professional Civil Engineer.

2. You have been, I believe, a long time employed in England as a Civil Engineer? Yes, I have had considerable experience.

3. Will you state to the Committee whether you have had anything to do with rivers, docks, harbours, the currents of rivers, and the opening or deepening of their channels? I may state that my experience has been very considerable in harbours, and I have had my attention very much called to river improvements also. I was brought up with my late father, who was a Civil Engineer, in the north of Scotland, the coast of which is very much exposed to a very heavy sea, and he undertook several harbours there in very exposed situations. Some of them had been driven down frequently, and under his management and superintendence they were built, and have stood to this day like a rock.

4. Will you mention some of these harbours? The new harbour of Wick; the harbour of Wick in Caithness; the harbour of Sarelet; the harbour of Lossiemouth, in Morayshire; the harbour of Pittulie, Aberdeenshire; and I have had to do, indirectly, with the improvement of the Clyde, and have had frequent communications with my late brother, who was the Engineer of the Clyde. I also joined my late father in removing from the strand the "Great Britain" steam-ship, in Dundrum Bay, in 1847. I planned and superintended the building of a pier at Innellan, in the Firth of Clyde; also the repairs and improvements of the harbour of Rothesay; the harbour and pier of Gourack, near Greenock. I have had occasion to travel very much through England, and, of course, as I travelled I took particular notice of the improvements of the different rivers and harbours in the various places I visited. I may mention, particularly, the Rivers Tyne and Wear, in the north of England, where large sums of money have been expended in their improvements for navigation purposes.

5. *By Mr. Weekes*: Were any of the works you have referred to, harbours affected by a great deal of silting, or deposit, such as rendered the navigation uncertain, by forming bars, flats, or shoals? I omitted to state that I was Resident Engineer of the new harbour and docks at West Hartlepool, in Durham. There was a considerable deposit in the channel there. Sir John Rennie's advice was to dam up a large reservoir behind, and to scour it out by sluices at low water. This had the effect of scouring it, and of making the water sufficient at the dock entrance, but it did injury by sending the stuff to sea, where it deposited, and formed a bad bar, so much so, that vessels which formerly could come end on to the waves, after this deposit took place, had to run away to leeward and take the bar in a cross sea for a considerable distance. This, our Company protested against, and pointed out the evil effects.

A. Bremner,  
Esq.

2 Dec., 1856.

- A. Bremner, Esq.  
2 Dec., 1856.
- effects of this scour, and we had some of the members of the Tidal Harbour Commission sent down, Captain Washington of the Royal Navy, and some others, and the consequence was, that the Admiralty put a stop to the scouring process.
6. Your experience then has reference more to harbour improvements, not so much to rivers? To harbour improvements mainly.
7. Has your attention been at all directed to the deepening of tortuous rivers? Yes, I have had my attention directed to that subject, and I have given it very considerable attention.
8. Have you been employed in any considerable works of that nature? Not directly.
9. *By the Chairman:* Is not the River Clyde of that nature? Yes. But it was more indirectly that I was employed on the Clyde; my late brother was directly employed there, and I have had frequent consultations and intercourse with him upon the subject.
10. You have been up the River Hunter I think? Yes.
11. Do you know that portion called the Flats? Yes, I had my attention called to these in passing up.
12. Have you examined this plan? (*Referring to the plan produced by Mr. Moriarty.*) Yes, I have been looking over it slightly this morning.
13. Can you state to the Committee what you would recommend for the clearing out of that channel? (*Referring to the channel marked on the plan.*) I may state here, that I do not consider, so far as I have seen of this Colony, the rivers so called to be what, at home, are considered rivers—that is to say, the water contained in them is more tidal water than inland water, except that coming down by occasional freshes.
14. You do not, of course, mean when there is a fresh or flood? No.
15. But the great body of the water generally? Yes.
16. *By Mr. Jones:* If I understand you, you regard them more as estuaries than as rivers? Yes; and I would apprehend that whatever would tend to exclude the sea water from flowing up, and then, of course from having a body of water to scour down, would be a very great detriment to the improvement of a river. The more the water is encouraged or increased from the sea, the lower the level is kept above, of course, the greater will be the quantity or flow in the upper reaches of the channel, and, of course, the greater will be the scour as it recedes; and I would say, with regard to the Hunter, that great care ought to be taken not to prevent any water from flowing upwards, because, by that means, you reduce the scour in going out at the entrance. Whatever tends to reduce the influx of the water up the river, of course, reduces the outpour again, and, therefore, there will be a danger of its silting up at the entrance; it requires all the current that can be got to carry it out to sea. Land floods are so seldom, the scour from them cannot be depended upon; but the tidal, which in this case is the natural scour, comes regularly every twenty-four hours. The entrance at Nobby's is differently situated from any of the other bar harbours on the coast, judging from what I have seen on charts of the Clarence and Port Macquarie—the latter I have visited. They go direct, or nearly at right angles into the sea, just as if this were cut through here. (*Pointing to the plan.*) Now, I believe what keeps Newcastle harbour open at all, is the projection of Nobby's at this point; the stuff held in suspension is carried down here, and washed on to the beach.
17. You consider that the existence of the breakwater as connecting Nobby's with the mainland prevents the formation of a bar just outside? Yes; if it were not for this breakwater, no doubt there would be a tendency to the formation of a bar. As I have said before, it is important to keep the channel open as much as possible to allow the water to flow, for whatever impedes the water is injurious.
18. If these channels were blocked up there would not be so large a body to go up the river as if they were kept open, and consequently there would not be so much depth above? No.
19. *By Mr. Weekes:* Supposing a wall were built across the water here, would the water that came flowing from the sea be higher because it was stopped by that wall? At that particular place, the water would rise more rapidly, until it attained the sea level.
20. Will not water always find its level—how would the rise of the tide of the sea make it higher because this wall was built across; the height must be regulated by the rise of tide of the sea? Supposing it were high water above the dam, and low water below it, of course, you would have five feet less water below the dam than above it.
21. No doubt there will be less water on one side of the dam than on the other, but I want to know how the building of a dam across the river would deepen the water on the lower side? It will not increase the depth of the water at the dam. I think I understand your question now, it is this, if by putting a dam here, an additional quantity of water would come in here.
22. Would any obstruction here (*pointing to the plan*) prevent the egress of the tide? Yes, because as you obstruct it here you heighten your level here, and then the water would not rise so high up the channel.
23. *By the Chairman:* Have you read Mr. Moriarty's general specification of work to be done, in clearing and deepening the Hunter River at the Flats? Yes.
24. Will you state your opinion with reference to the effect which would be produced upon the river, provided those portions which are tinted on the plan before you, were deepened by the dredging machine? (*The Witness referred to the plan.*) I would say that I cannot from looking at this plan, and from the partial observation I have been able to make of the river, exactly express an opinion that this would be the line I would prefer. The course and rate of the current is not marked on the plan, and it would require some particular study and watching of the currents before I could decide whether this would be according to my idea of an improved line.
25. Have you any other suggestions to make? No further than that I would be very careful about excluding the sea water from any of the channels; and, as a general principle, I would study and watch nature, in order to take advantage of it, but not in any material way to attempt to check it.

## SELECT COMMITTEE ON THE DEEPENING OF THE RIVER HUNTER.

26. Are you aware that all these mud-flats between the sheet piling at N, M1 and M2, are entirely covered at high water? That is a matter to be considered. A. Bremner,  
Esq.
27. *By Mr. Jones*: Do you conceive that if Mr. Moriarty does not interfere with the water passing up the river, but intends simply to direct the current into the main channel, that principle is the correct one? I apprehend it is, without entering into the question as to the carrying out of that principle. 2 Dec., 1856.
28. *By Mr. Flood*: If Mr. Moriarty's plan is carried out by stopping up all the tributary channels, would it not have the effect of scouring out the main channel by the tide both ebbing and flowing? I apprehend not well, because the mere stopping up prevents a large body of water from flowing up the various upper reaches of the Hunter, Williams, and Paterson, &c.
29. Would it, for instance, prevent the water rising so high at Hexham as it does at the present time? There might not be much apparent difference, yet the quantity of water very much reduced because of the checking, although it might be but partially, of the tidal wave. The same volume of water would not be there to distribute itself over other parts.
30. If Mr. Moriarty's plan were carried into effect, would there be any less water at Ash Island than at present? I apprehend there would.
31. Then, of course, the tide would not rise so high? The tide might rise nearly as high, but there would not be the same quantity of water.
32. As a matter of fact, would Mr. Moriarty's plan have the effect of preventing the tide from rising as high at Hexham as it does at the present time? It would prevent the tide from rising quite so high, and there would be a considerable reduction of the scour down.
33. *By Mr. Jones*: When you say it would prevent the tide from rising so high at Hexham, do you give that answer upon the principle that these piles, shewn in the plan, are intended to interfere with the flow of water? Yes.
34. But supposing these piles were a little above low water mark, or equal with low water mark, would they interfere with the flow of water? Not so much; but at the same time I have a great objection to any thing in the bed of a river to prevent the flow of water.
35. *By Mr. Flood*: If below low water mark of what use would they be at all? I do not know that they would be of any use, but they would still be a hindrance to a certain extent.
36. *By the Chairman*: In your opinion would simple sheet piling, as proposed in the plan before you, be effectual for deepening and keeping clear that portion of the Hunter? Certainly not.
37. *By Mr. Plunkett*: If you were called upon to give an opinion, that you would be responsible for as a professional man, what course would you like to take yourself? I would prepare several machines, formed so that they would have the exact specific gravity of water, or a little less, so that they would merely float. I would put a different signal on each, and set a number of persons at different parts of the river to watch them and take the bearings, I should thus ascertain the rate and direction of the current, as preliminary to any other proceedings.
38. *By the Chairman*: What time would that occupy? I do not think it would be long, perhaps five or six days; of course a great deal would depend upon the state of the weather at the time.
39. *By Mr. Weekes*: And upon the strength of the current would depend your future recommendation? Yes; but I would just say, that from the small rise and fall of the tide, there being no land water, except occasionally, there would be very little chance of clearing out the river or of deepening it by the scour; you must dredge it—there cannot be two opinions about that.
40. *By Mr. Plunkett*: Do you know the quality of the soil in the bed of the river, so as to distinguish what portion had mud, and what sand? No.
41. Would not that be a matter of importance for you to consider? Yes, that would be very material, because upon the quality of the soil forming the bed very much depends the action of the current to scour.
42. Would you be able to ascertain all that in five or six days? I think I could by having assistants, which I could depend upon. Of course I would take for granted that this plan was correct.
43. *By Mr. Jones*: Correct in what respect? In its lines and bearings. If I had to survey the lines of the river, of course that would be a very different thing.
44. *By Mr. Plunkett*: You assume these to be correct? I assume these to be correct.
45. *By Mr. Jones*: Then, as far as I understand you, your present impression is, that to make any material improvement the best way will be to dredge the shallow banks? Yes.
46. And that with the slight fall and tide there is there, any great improvement from the scouring process is not to be anticipated? No. The river Clyde has a rise and fall of fourteen feet, and with all that scour, as well as a constant flow from the interior, in addition to which there are a great number of steamers constantly going up and down, and still there is a great quantity of dredging. My late brother invented a double acting dredge, which does double the work of the ordinary dredge; one of these was employed in the river, and, I think, there were seven besides that for a great part of the year constantly dredging.
47. *By Mr. Flood*: Have you seen the breakwater at Newcastle? Yes.
48. Are you able to give the Committee any opinion as to the stability of that work? I can only say that if the same kind of work were where I have seen works of a similar nature carried out, it would not stand five hours; but it is protected by the reefs on the outside.
49. Is there any improvement you could recommend which would give greater permanency to the present structure? Yes. I certainly would recommend that the outer part be roughly coursed; faced on with the same material as is there now.
50. With a plain surface? You need not be particular, just have it roughly done, to give the stones a bearing one from the other, just to prevent the continual breaking and change of the stones.

- A. Bremner, Esq.  
2 Dec., 1856.
51. Are you aware that there are some improvements going on there now? I see they are filling up one of the gaps that was caused by the sea.
52. Have you seen the plan of the works contemplated? No, I have not; but I see that they contemplate groins to project from the present work.
53. Do you think groins will have the effect of securing the pier or breakwater from the approaches of the sea? I think not.
54. Why do you think not? I think the groins proposed to be run out to the south-east, seaward of the breakwater, are all but useless; it would be much more profitable to course the work from the end, and to secure the foundation by tumbling in large stones, roughly, just to prevent its slipping. These groins are useless, I apprehend, because of the action of the tide going north and south any stuff held in suspension is caught by the outlying rocks; so that in fact there are two natural groins. All that I apprehend to be necessary for the security of the breakwater is to course in, with a rough but uniform surface, and just give it time and it will naturally fill up. In fact I am not sure whether these groins will not do more harm than good, because the sea tumbling on the top of them and falling down, there would be a tendency to scoop out the sand.
55. Do you think the breakwater requires to be raised above its present elevation? The higher it is the better, because it gives more stability to the work below.
56. And prevents the rougher seas from rushing over? Yes, and gives greater stability and weight to the stones below, they having less specific gravity immersed than in air. The angle which my late father found to stand best, and which I have found good reason to abide by myself is, about 45 degrees. If the slope be made too horizontal, each stone depending on its own specific gravity, and the confined air, is apt to burst them out, while at an angle of 45 degrees, increased weight is given to the lower portion of the work.
57. The force of the sea is broken by the incline? Yes to a certain extent.
58. Have you anything further to suggest with reference to the breakwater?\*

Mr. John Tredgold Strong called in and examined:—

- Mr. J. T. Strong.  
2 Dec., 1856.
1. *By the Chairman:* You are the contractor for the sheet piling to be used on the Flats of the Hunter? I am.
2. Have you read Mr. Moriarty's specification for clearing and deepening the Hunter, at those portions called the Flats? Yes.
3. Have you completed any of the sheet piling? It is closed in, but not completed, and is being strengthened by putting in some spur piles.
4. Will you state to the Committee where this sheet piling is? It is from Snapper-hole Island over towards Mosquito Island, on to the tail end of a sand bank; it is not in the position shewn in the plan.
5. Will you state where it is? It goes more north-westerly than it is represented to be on the plan.
6. You personally assisted in driving these piles? Yes.
7. And therefore are perfectly conversant with the currents and the effects of the tidal waters on that particular portion? Yes, I was there almost every day.
8. Will you state to the Committee how long that has been enclosed in? It will be a week to-night since it was closed in.
9. What has been the effect of the current acting upon it since it has been closed in? Before we closed it in the current ran close to Snapper Island with great rapidity; it now strikes against the sheet piling and runs along the face of it towards Mosquito Island, and is scouring a deep channel next Mosquito Island.
10. *By Mr. Flood:* At present it strikes on the piling, and forms an eddy? Yes, in the ebb tide, about half tide, there is about six inches difference of level between one side and the other.
11. *By Mr. Scott:* Which side is the highest at half tide? The upper side. In the course of time I believe there will be a regular channel formed at the end next Mosquito Island, as deep as that previously on the other side, contiguous to Snapper-hole Island. Mr. Moriarty intended to prevent that from forming.
12. Have you anything farther to state, as regards this particular piling at this end? We found it working away a little at Snapper Island end, but we have since stopped it.
13. How did you stop it? By bringing the sheet piling up the banks some distance.
14. Do you think that will be effectual? I think so.
15. *By Mr. Jones:* How does the piling stand? In the channel it appears to stand pretty well; we are putting in spur piles to keep it up.
16. Is the rapid current now setting up at the upper end starting it at all? It is a little, near the outer end; one or two bays shewed symptoms of coming over.
17. Do you think as the current works in the channel it will scour away the piling at the upper end? I think it tends to scour away the piling, and to take away from the upper end.
18. When it does take away that, will it not gradually work down and take away the whole of the piling from the other end? Yes, unless some means are taken to prevent it.
19. *By the Chairman:* What is the height of the piling at the other end? A little above high water mark at spring tides.
20. *By Mr. Flood:* How do you account for the difference in the height of the water—for its being six inches higher on one side than on the other? There is not sufficient way out for it through the channel.
21. As soon as the tide gets above the Flats it becomes level? It begins to approach a level after the turn of the tide, but it runs quicker at half tide than at any time.
22. There is a difference in the perpendicular height of six inches? Yes.
23. *By Mr. Jones:* Caused by this acting as a temporary dam? Yes; the flood tide runs much slower, and sets more out of the way.
- 24.



24. *By the Chairman*: I presume the ebb tide is so much stronger than the flood on account of the fresh? The ebb side is always stronger. Mr. J. T. Strong.
25. *By Mr. Flood*: Is there any difference in the height of the water at flood tide? None. 2 Dec., 1853.
26. *By Mr. Weekes*: Have any experiments been made upon the strength of the current? I think Mr. Moriarty made some before the work was begun.
27. *By Mr. Flood*: Does it strike you that there is not a more considerable body of water on the main channel side in consequence of the pile dam? There must be a larger body of water.
28. If the piling had been more towards the north point of Snapper Island, would it not still have had the same effect of keeping the water at the south side lower, in consequence of there being a larger body of water in the main channel? No, I think not; because I think the water would have got away quicker; it comes in here and is dammed, and cannot get back again, because the current is following it up.
29. There is a small space from the piling to the main channel? Yes, a considerable distance; it is, I should think, a hundred yards to the north point of the island.
30. *By the Chairman*: In your opinion, if the piling had been put up exactly as your plan requires, had it the least chance of standing? No, it would not have reached the bottom at all; the fifteen feet piling specified for, in some portions would not have reached the bottom.
31. For what reason? There is twenty feet of water.
32. Is that owing to the water having deepened since the first part of the work was commenced? No; there was that depth of water before the work was begun.
33. Whereas the specification states fifteen feet? Yes, fifteen feet sheet piling.
34. Supposing you had allowed for twenty feet piling, and had merely put in piling, would that work have stood, as it was originally planned? It never would; it ought to have been double row piling.
35. *By Mr. Weekes*: Even if the piles had been of sufficient length, they would not have stood? No; a double row would have been required, and filled in between.
36. *By the Chairman*: Supposing that N was perfectly complete and good work, and likewise M 1 and M 3, what is your opinion in respect to the currents—would they or not force their way in both of these flats? I think they would force a great deal more water into the main channel.
35. Would not the waters have found an outlet in some way or other to join this channel, with these sand or mud flats between? I think in time the bottom would scour away at the ends of this piling (M 3), and eventually take it away.
36. Have you observed that any effect has been produced since the piling has been completed upon the steamers' channel? I cannot say that I have. I have heard that there is deeper water.
37. Does the tide infringe upon these mud-flats? I cannot tell.
38. I see by reference to the schedule of tenders for sheet piling, that your tender was for £3,611 17s.? Yes.
39. For what work was that amount given? I was to execute 880 yards of ten feet, and, I think, 583 yards of fifteen feet.
40. In conformity with that tender have you procured the slabs? Yes, a great portion of them. I have an account in my pocket of the number we have ready in the bush and at the wharfs.
41. Will you state to the Committee whether the Civil Engineer has told you whether all these slabs you have already prepared, according to contract, will be required? He has not stated whether they will all be required or not, but he wrote a note last Saturday to say I had better not prepare any more.
42. Will he take those already prepared? He has not told me.
43. Has he said nothing about ballasting instead of sheet piling? I heard it from the clerk of the works, Mr. Dear.
44. *By Mr. Flood*: Mr. Dear told you, that the Engineer contemplated putting ballast down instead of sheet piling? Yes; he told me that Mr. Moriarty thought of using up the timber cut, and doing the remainder with ballast stone.
45. *By Mr. Weekes*: Were you limited to the quantity you should prepare at any one time, or for any portion of the work? No.
46. Or would you be at liberty under this contract to provide sheet piling for the whole of the works at once? Yes.
47. Was there anything in the conditions that enabled the Engineer to terminate the contract, without reference to anything you might have in hand for the purpose of carrying on the work? There is a clause to the effect that he shall be at liberty to reduce or to add to the quantity of work, if the Government thought necessary.
48. *By Mr. Flood*: Is there a clause in the contract that the Government may stop the work? Yes.
49. *By the Chairman*: Do you consider that whatever piling you have already prepared the Government are bound to take and to pay you for? Yes. Mr. Moriarty has been urging me to get the timber as quickly possible, and to put on a greater number of barges to convey it to the different places required.
50. *By Mr. Flood*: You would be more likely, if you ordered a large quantity of piling, to get it at a cheaper rate than if you bought it from time to time in small quantities? Yes; we could also get the work done at a more reasonable rate by employing a large number of men and lighters at the same time. I have here a memorandum of the timber prepared and on hand for sheet piling on the Flats of the River Hunter. (*The witness handed in the same Vide Appendix A.*)

Mr. J. T.  
Strong.

## APPENDIX A.

MEM. of Timber prepared and on hand for Sheet Piling on the Flats of the River Hunter,  
2 Dec., 1856.MEM. of Timber prepared and on hand for Sheet Piling on the Flats of the River Hunter,  
29 November, 1856.

4,711	feet of piling, 12 × 12, at 1s. 9d. ...	...	...	412	4	3
90	pieces of waling, 16 ft. 6 in. × 12 ft. 6 in. = 8,910 superficial feet, at 25s. ...	...	...	111	2	6
80	" sheet piling, sawn various lengths, 12 × 5 = 8,000 feet superficial, at 25s ...	...	...	100	0	0
1,900	" 10-foot slabs, at £20 per 100 ...	...	...	380	0	0
100	" 12-foot do., at £22 " ...	...	...	22	0	0
250	" 15-foot do., at £30 " ...	...	...	75	0	0
				<u>£1,100</u>	<u>6</u>	<u>9</u>

THURSDAY, 4 DECEMBER, 1856.

Present:—

Mr. ARNOLD,	Mr. JONES,
Mr. FAUCETT,	Mr. PARKES,
Mr. FLOOD,	Mr. SCOTT,
Mr. WEEKES.	

A. W. SCOTT, ESQUIRE, IN THE CHAIR.

Mr. J. Scott.

Mr. James Scott, called in and examined:—

1. *By the Chairman*: I believe you are a Civil Engineer by profession? I have been a shipbuilder by profession, but I have done some work in the Civil Engineering line.
2. I have suggested to this Committee that, in all probability, you could afford them some information with respect to the effects of currents and tide ways upon work in rivers? I have been in that line; all my life I have been connected with shipping, rivers, and harbours.
3. Have you ever performed any work with respect to clearing the channels of rivers by removing obstructions? Yes, in the Mauritius, I have had to do with deepening work.
4. Do you know any portion of the River Hunter? Yes; I have been up the River Hunter.
5. Have you ever examined that portion called the Flats? Only going past with the steamers, but I have had information, from time to time, from the captains of the sailing vessels and steamers.
6. *By Mr. Weekes*: Have you had any experience in clearing rivers of obstructions like these flats? No more than that I have been casually amongst them where they were doing it on the Clyde, Sunderland, Tyne, London, and other parts.
7. *By the Chairman*: Will you have the kindness to examine this map, which shews the plan proposed by Mr. Moriarty, for the improvement of this part of the river. (*The Witness here examined the map, which was explained to him by the Chairman.*) In your opinion, from the practice you have had on the Clyde, do you think that a channel following the line suggested by Mr. Moriarty would be more easily kept clear after it had been dredged and deepened than the present tortuous channel? My opinion is that the straight line is the best. I was looking over a plan of the Clyde, since I received the summons to attend this Committee, and I see that all the points are cut off, and all the hollows filled up, making the course of the river as straight as it possibly can be.
8. Therefore, in improving this river, you would naturally adopt the straightest possible course? Yes; I have every belief that the straighter the course be, the more easy it will be to keep the channel clear. It is a well known fact that a large stone, a tree, or a small boat, has been the means of forming a small bank, this bank forming an eddy, and through time a large bank has been, by so small an obstacle, formed.
9. Then you would prefer this proposed channel, although it would cost more on account of the dredging it will require, rather than adhere to the old and more tortuous channel? I would, for various reasons. I find that in all turns of a river, wherever there is the least eddy—an eddy round a point—it always causes a slackening of the water, and there the deposit accumulates; but the straighter the course is the more easily every particle of matter goes along with the current.
10. Now presuming, or taking for granted, that these red lines, placed upon this map by Mr. Moriarty, correctly shew the course of the currents previous to any improvements whatever being made, and then taking it also for granted that certain fencing or sheet piling at N, that is from Snapper-hole Island to a mud flat here, is completed, what in your opinion would be the effect of the current setting into the bight thus formed at N. I may add that we have been told by a previous witness that the water at the upper side of that barrier, at N, is six inches higher than the water on the lower side—what do you think would be the effect of the water being stopped there in that way? I am inclined to think that if the water is stopped there it will strike against the point of Snapper-hole Island, and ultimately take away a portion of it. I would rather have the piling commenced at this north-east corner of Snapper-hole Island, and carried across the opening in a parallel direction to the present channel, though the expense then would be much more than the expense where it is proposed in this plan, but the advantages would be much greater, and deepening the channel at the same time.

11. Supposing we have evidence to the effect that the water striking here against this barrier at N, forms an eddy, and comes back and is forcing a channel round the corner of the piling through the soft mud bank? Undoubtedly the water striking here will find its way on either side of the sheet piling, and form a new opening over the mud bank. Mr. J. Scott.  
4 Dec., 1856.
12. *By Mr. Flood:* That would not have happened, you think, if the sheet piling had been in a line with this north-east point of the island? The stream would then have been in a better position to have followed the channel.
13. The curve would have been much more easy, and the stream would have met with less impediment than it will according to the proposed plan? Yes. This point is just formed as it were by nature to catch the water, which forms an eddy, and accumulates all silt carried down by the current.
14. *By Mr. Faucett:* Is that barrier in the most suitable position for receiving, with the least degree of force, the currents coming down the river according to these red lines, and from Fullerton's Cove? No, I have said just now that I do not consider it in exactly the best position. An idea struck me, and, in fact, I have consulted with parties respecting it, that is, that vessels going down there from Sydney, taking nothing but ballast, and I would just let them heave down their ballast instead of this piling. There could be a ballast bank formed.
15. *By Mr. Flood:* Which would be less costly and more permanent? Yes. If there is to be a dredging machine employed, and if gravel or any hard matter is got up from the bottom, it could all be laid along with the stones, and make a permanent embankment.
16. *By the Chairman:* Now, supposing the piling at N, M, M 1, and M 3, were completed, leaving between each of them sand or mud banks, as you see indicated on the plan, which mud banks are covered at high water, what would be in time the effect of the currents, supposing no other work to be done except the piling? It would be much better to have these places entirely closed up with ballast, otherwise my opinion is, that the uppermost current after high water will still go over these banks and carry them away, that it will force other channels; and the only plan will be to bring the piling more nearly into a line with the channel itself, as I suggested just now, if the present tortuous channel is to be persevered in.
17. Are you aware whether a vessel would experience greater difficulty in a curved and tortuous channel than in a straight one—whether she would not be obliged to go slower and more cautiously than she would with the same amount of water in a straight channel? Doubtless she would require to go slower, in accordance to the angles the vessel has to steer.
18. Supposing Mr. Moriarty's plans had been carried out, and that the portions tinted pink on the plan were dredged to the proper width and depth—could that have been the best plan, or would it not? I am fully of opinion that Mr. Moriarty's line of channel would be the best, but it would be a more expensive one.
19. Had Mr. Moriarty's plan been carried out in its integrity, do you think that this suggestion of yours, about carrying ballast to this very great length over these flats between the piling, would have been required? No, I do not think so. Having not seen the cross sections, I am not so able to judge on the difference of cost.
20. It would have been saved? Yes. My suggestion for carrying the sheetings to this point here, was merely for continuing the old channel. If Mr. Moriarty's channel is deepened in the way he proposes, this other channel must be closed up, or the water will run in the same way. You must either continue one channel or the other. There is not flow enough of the tide here to be of any use in keeping it clear unless one of the channels is stopped up. There are only the freshes to scour the river. I think, if the new channel is adopted, you must fill up the old one, to allow the current to run down as rapidly as possible in the new one.
21. *By Mr. Faucett:* Would the removal by dredging of these tinted sand banks in the proposed new channel cause the water to be sufficiently diverted into the new channel to make it permanently superior to the old one? I believe it will, should a sufficient mouth to the upper end of the channel be constructed by embankments or sheet piling.
22. And will it also have the effect of rendering the old channel unnavigable for the same kind of ships as at present navigate it? It greatly depends on how the old channel is obstructed.
23. Supposing, again, these three tinted sand banks to be dredged away, will there be such a supply of water as to leave the old channel and to make the proposed new channel both navigable, to the same extent as the old channel is at present navigable? No; I do not consider it would be so.
24. *By Mr. Arnold:* Would the natural effect of opening the new channel be to fill up the old one? That would be the effect to a certain extent. The stream being divided, it would only have half the force.
25. Are you also of opinion, that artificially filling up the old channel would have a good effect in clearing out the new one? I am satisfied it would be so.
26. Filling up the old channel would more effectually clear the new channel, although the natural effect of opening the new one would be to fill up the old one? Precisely.
27. *By Mr. Faucett:* I imagine from what you have said, that without dredging these tinted sand banks no real improvement can be made in any channel? No; I think the dredging must be gone on with to make either channel navigable.
28. As a first step? Yes.
29. *By the Chairman:* Have you the least doubt in your mind, now that you have considered this plan, which of these two channels is the best? I am in the belief that Mr. Moriarty's channel would be the best to be carried out, as it would be a straight line.
30. *By Mr. Faucett:* The old one is quite a bending course, and the one newly proposed is, as near as can be, a straight line? Yes. It is well known that where the run of a river is impeded, it is sure to leave off its burden somewhere or other. But I am quite of opinion that

Mr. J. Scott. that this old channel could be much improved by cutting off the projections, and filling up the openings, below Snapper-hole Island.

4 Dec., 1856. 31. *By Mr. Arnold*: Looking at the whole question, are you of opinion that the dredging and the piling ought to go on simultaneously? The one without the other is of very little use.

32. Or, at all events, the piling is of very little use without the dredging? Yes. There is one thing to be said, that the moment you begin to dredge you can heave in the silt to support what piling you have done.

33. The effect of the piling ought to be to divert the current into the dredged channel, and the effect of the dredging ought to be to divert the current from the piling, so that the one would assist the other? Yes. But the piling ought always to be commenced at that portion to be dredged, at the very top of the stream.

34. *By Mr. Faucett*: Then, in fact, this place at N was not the proper place to commence? I do not believe the piling at N ought to have been commenced first.

35. It should have commenced higher up in the stream? Yes.

36. *By Mr. Arnold*: You have said that you think, in order to magnify the force of the current upon the new channel, it would be desirable effectually to fill up the old one—do you not think, that if it were filled up with the soil dredged out, the effect of the current would soon be to carry it away, so that it would not be an effectual bar? It would have that result; but the way to fill up the old channel would be from bank to bank, at the nearest points.

37. Do you not think that piles driven in would form a good nucleus for a bar of that sort? No doubt it would.

38. So that if the dredgings of the new channel were thrown down where the piling is already erected, that would be much more likely to stand as a bar than if put down by itself? Much more so. In all the improvements that were going on in the Clyde, and that has been a river where a great deal of engineering skill has been expended, wherever the river was to be deepened, they made good all the banks before ever they commenced dredging.

TUESDAY, 9 DECEMBER, 1856.

Present:—

MR. ARNOLD,  
MR. FAUCETT,  
MR. JONES,

MR. PARKES,  
MR. PLUNKETT,  
MR. SCOTT,

MR. WEEKES.

A. W. SCOTT, ESQUIRE, IN THE CHAIR.

Mr. C. Paine.

Mr. Charles Paine called in and examined:—

- 9 Dec., 1856. 1. *By the Chairman*: You command the steamer "Illalong"? Yes.
2. Have you been for a long time engaged on the Hunter River, as a commander of vessels or otherwise? About twenty years.
3. Do you know the whole of the River Hunter, both with respect to the deeper portions and the flats? Yes.
4. You are, I suppose, well acquainted with that portion commonly known as the Flats, by Snapper-hole Island? Yes.
5. Will you state to the Committee whether you have, from time to time, had great difficulties in that portion of the navigation of the Hunter? Yes, at the lowest part of the Flats, that is, the part nearest Newcastle.
6. Will you refer to the plan before you [*The witness referred to the plan*], will you point out the spot where you have generally met with these difficulties? On the shoal that lies to the eastward of Snapper-hole Island.
7. Will you state to the Committee the nature of the difficulty you refer to? I refer to the shoalness of the water.
8. Is the difficulty in any measure caused by the tortuous nature of the channel—do you think the navigation would be improved, if the curved line marked on the plan before you were adopted as the channel? No doubt it would be much better if we could get a straighter course.
9. *By Mr. Jones*: Do you not think there is much greater difficulty owing to the bends of the channel, than there would be if you could run a straighter course? Yes, it is much more intricate.
10. Is there not much more chance of grounding on the Flats? Yes.
11. *By the Chairman*: You could not go at full speed, if the channel were ever so deep there? No, you would have to ease off.
12. You have been up and down this channel frequently since the late fresh? Yes.
13. Do you find any difference in the channel—has the depth increased? There is a slight difference, caused by the piling at the end of the island; it has prevented the water from passing between the island, and has shot a current more to the westward.
14. You have to make a greater sweep now, since the erection of the sheet piling at the end of the island? Yes.
15. Where do you think the current is now apt to strike, supposing the sheet piling to stand? The whole strength of the tide runs past this island.
16. Is it approaching that mud-flat? Yes.
17. If so, do you think that will force any channel between Mangrove Island and Snapper-hole

hole Island? I do not think it will; it is a hard foundation there; it has a pebbly, stony bottom. Mr. C. Paine.  
9 Dec., 1856.

18. What will be the result if it strikes there—will it make a greater bend at that portion of the channel, or will it straighten it? It will make a greater bend.

19. If so, will not the difficulty of managing your steamer there be increased? It will.

20. Looking at that plan, do you not, as commander of a vessel trading to the Hunter for so many years, think it would be a better plan to dredge the portion of the river denoted by the tinted portion of the plan? Yes, decidedly so.

21. You can give us no information with respect to the sheet piling, I suppose? No, I have not seen it.

22. *By Mr. Jones*: How long have you been on the river? Since 1837.

23. Has there been any change in the bed of the river since you first became acquainted with it, as to the depth of water on the Flats? There is, after a heavy fresh.

24. You find a greater depth there? Yes, it sweeps away a portion, but it accumulates again.

25. Do you recollect the dredge being there in 1844 and 1845? Yes.

26. Did you, after the dredge had been working there for some time, observe any improvement? Only for a short time. In almost every place where she had worked there was a small bank formed; she had scooped out a number of holes, and the dead trees which came down the river, and the straw and rubbish thrown in from the farms higher up the river, were swept down by the freshes, and coming to these holes, formed small banks.

27. Then, within a comparatively short time after these dredges had been there, there was no greater depth of water in the channel than before? No.

28. You do not find any perceptible shoaling in the water upon the Flats now, as compared with what there used to be? No.

29. *By the Chairman*: What is the depth of water at the lowest tides, over the shallowest parts of the Flats? About seven feet or six feet ten inches.

30. And the channel there, is it a great breadth? No, it is not above fifteen feet wide, or twenty feet.

31. *By Mr. Jones*: So that a vessel swung across stops the navigation? Yes; at a distance of ten feet from where you get the deepest water you will find a difference of six or seven inches.

32. *By Mr. Weckes*: Does the alteration to which you have referred at the end of Snapper-hole Island consist in the widening or the deepening of the channel? It alters the course.

33. Shewing that the current is eating into that bank? Yes.

34. *By the Chairman*: Mr. Moriarty proposes to deepen the channel, which is denoted on the plan by the portion tinted, to a depth of ten feet, by a width of a hundred feet. Supposing that course were carried out, would not that be infinitely better than the present channel? Decidedly. There is a channel now five feet six inches deep at high water, with a rock running across in a straight direction from Snapper Island to the Bluff.

35. Have you any further recommendations to make to the Committee, with reference to the improvement of the Hunter? No. If this were done it would decidedly improve the Hunter; and no doubt, if it were once dredged away, there would always be a good passage kept.

George Boyle White, Esquire, examined as follows:—

1. *By the Chairman*: You are a surveyor by profession, I believe? Yes.

2. And have been so for a long time? Yes.

3. About forty years? Thirty years in this Colony. I arrived here in January, 1826.

4. Were you in the employ of the Government? I was. I was the Senior Government Surveyor when I left the service.

5. Were you at one time employed by the residents of the Hunter River in making a map of the River Hunter? I was.

6. What was their object in having that map made? I made that map in November, 1844. The object was to lay it before Sir George Gipps, the then Governor of the Colony, for the purpose of requesting that something might be done towards deepening the river.

7. At what portion? From West Maitland to Newcastle.

8. In carrying out this survey, of course, you carefully sounded the river throughout the whole course? I did; here is the lithograph map of it. (*Witness handed in the same.*) The original map is in the Court House at Maitland, at present. It is on a much larger scale than this.

9. You know, therefore, very accurately that portion of the Hunter commonly known as the Flats? I do.

10. Will you have the goodness to state what you found the depth of the water to be at low water, at the various obstructions on these flats? It is so many years ago that I can scarcely remember; but I think we had five feet eleven at low water, neap tides, at the greatest obstruction—what I should call the southernmost obstruction on the river, nearest to Newcastle; then it slips up towards Snapper-hole Island, as it is called here—I do not know it by that name.

11. Will you look at the corresponding sections to the 21st section. (*Referring to Mr. Moriarty's sections.*) Did you find that the river was of greater or of less depth at the time you made your survey than it appears to be by Mr. Moriarty's sections at the present time? I have not tried the river myself, but from the sections here, there is very little difference; it depends entirely upon the time when these sections were taken, as there is a difference of four feet at neap tides, and six feet at spring tides. It all depends upon the state of the tides when it was taken.

12. Do you find that there is any difference between your plan and the plan of Mr. Moriarty

as

G. B. White,  
Esq.

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- G. B. White, Esq.  
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- as to the depth of the water there, looking at section 21 of your plan, and the corresponding section of Mr. Moriarty's plan? I have not tried the river myself of late years, but there is very little difference in the two plans.
13. What did you propose to be done there in deepening these parts, after making your map? I proposed that, in some parts, the river should be narrowed longitudinally—that banks should be cut, and the subsidiary channels should be blocked up, and the river confined to one channel. But hydraulic engineering is one of the most difficult things a man can deal with. It should never be undertaken without much investigation and consideration.
14. Then, under your original plan, dredging, I presume, was absolutely essential? It was proposed by me, and Sir George Gipps at the time objected, until he came himself and personally went over the flats with me. He was himself employed for two days in these parts. I was perfectly satisfied my plan could have been carried out, and I believe it would have been if he had remained here.
15. Sir George Gipps saw the absolute necessity of dredging? Yes, he did, and sent the Dredging Machine almost immediately afterwards.
16. With your experience, would you commence stopping up the various channels without employing the dredge? I think the first thing I should attempt to do, would be to stop up the channels.
17. Without ultimately employing the dredge? No; I should employ the dredge where the channels were stopped up, in the first instance, to get material for forming new banks.
18. Do you think that the simple act of stopping the channels would render these flats navigable to a greater extent than they are now? No, I do not.
19. The dredge is absolutely necessary? I think the dredge absolutely necessary. It depends entirely from where you commenced deepening the river. I should begin to work with the water, and not against it. I think the reason that the dredge never did any good there was, that it was never worked upon a system. It made one hole, then another, and then another, and never worked upon a system from the beginning. I made a map of the harbour, on a very large scale, at the same time I made the survey of the river. (*Witness produced the same.*) It was made in 1844.
20. To make the Flats permanently navigable, would you continue the tortuous channel at present in use, or would you endeavour to make it a more gentle curve? I would, of course, make a large curve, if I possibly could, in preference to a small one; but there is a sharper curve to the northward. The curve, except from the narrowness of the channel, would not impede a steamer. Perhaps I may not be considered incapable of giving an opinion on this subject, having served as a Marine Surveyor in the Navy for eight years.
21. Do you, as a Marine Surveyor in the Navy, think that the present channel, which you see indicated by the dotted lines in Mr. Moriarty's map——? It is but a gentle curve when you look to this scale; but the other curve would be the best, but would be considerably more expense; it would have a great deal of embanking.
22. Have you ever surveyed that portion that is indicated by the continuous line? I have, the whole of it.
23. But with the idea of forming a channel there? Yes; during the time that Sir George Gipps was there, I ran several transfer sections from shore to shore, not only from Mangrove Island, but I took from Mosquito Island to the main.
24. According to Mr. Moriarty's survey (I do not know how it agrees with yours), it appears there is deeper water in the proposed channel? There is deeper water in the channel now used by the steamers than in the proposed channel that the black curved line indicates in this map, and there would be more "making" necessary where the black line now is, than upon the dotted line, or the channel now in use.
25. You know the various currents of the river, always keeping in mind the Flats? Yes, and they are very variable, varying with the flow of water, and varying with the tidal influences.
26. This channel by Snapper-hole is of considerable depth, I believe? Yes, there is plenty depth of water all down here. (*Pointing to the map.*)
27. What do you consider the depth of water arises from? Merely by the wearing out by the water. These are all shell banks, shell and gravel.
28. It is caused by the scouring? Yes, and the ebb tidal influences. Land water is little affected in that portion of the river.
29. How does the current set towards the sea here at ebb tide? The currents are influenced by the banks of the river. Sometimes the current impinges upon a bank, and goes off almost at an angle. The tide in the channel between Snapper-hole and Mosquito Island runs with great strength. There is a report in some Government papers upon the tidal influence in this channel. They were made by me at the time.
30. How did you propose to block up that channel—was it first by piling or ballast? I should have piled partially by fascines and gabions, ballasted with stone or *debris* from the shell banks.
31. Would you have done so partially to stop up the channels indicated at N, M 1, M, and M 2, or would you have carried it on the continuous line from Snapper-hole Island to Mosquito Island? I should have carried it in a continuous line.
32. If you complete the piling partially to N, M, M 1, and M 2, do you think that the set of the tide, still impinging on these various portions, would force the current through any of these mud or sand banks? Not if what I propose were promptly done.
33. I say if only the channels to N, M 1, M, and M 2, were stopped by sheet piling, or otherwise, and the banks between left untouched, would the river itself, sometime or other, force through it? I am of opinion that it might—that it would scour itself and make a fresh channel through the Flats.
34. Which would, in your opinion, be avoided by the continuous line? Yes, I believe a work of the sort cannot be partially done.
35. *By Mr. Jones:* To be of any service? To be of any service.

36. *By the Chairman*: What is your opinion, knowing the effects of currents, tides, and tidal influences, with respect to the sheet piling put up at N—you will perceive it is not used at the north-easterly end of Snapper-hole, but placed well to the westward—what do you think would be the effect of the action of the water upon the piling now, as it were, caught in a trap? The action of the water will not have so much effect as it would have if the piling had been placed more to the eastward; as it is now placed near the western point of Snapper-hole Island, and going north-easterly to the Flat it is much more likely to stand than if it were placed at the north-easterly point of Snapper Island, and going across northerly to the Flat.

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37. The contractor states to us that it is placed in the position indicated on the map, but going more to the westward; supposing he states also that the water coming here (*referring to map*), meeting with resistance here (*referring to map*), it was working itself there — ? Yes, so it would if it were placed so. Most of the hydraulic engineers writing on the subject, say, when piling in that way you should pile beneath the bifurcation.

38. The contractor also states that he has been compelled to protect Snapper-hole Island by means of sheet piling, and that the current of water being changed, there is caused an eddy, so that it goes this way (*referring to the map*), and is working itself a deep channel at the northern end of the N piling: is that likely to be the case? Very likely; indeed it will strike the water, and the water will fall back with considerable force, and form an eddy, which is likely to excavate the soil beneath.

39. Do you think that sheet piling will stand? No, I do not; I do not agree with sheet piling when the river is so likely to interfere with it.

40. If you think so, and that it is working the channel out here, it will become necessary to prolong N? Yes.

41. Until it will meet M 2? Yes.

42. It will ultimately be necessary to prolong the sheet piling, or make an artificial embankment from N to M 2? Yes.

43. Supposing that this embankment is ultimately completed according to your suggestion, how will it affect the channel at present in use by the steamer—will it approach Snapper-hole Island, or will it still keep the bank it always has kept—have you ever tried, by boring or other means, to learn of what these Flats to the eastward of Snapper-hole Island and Mangrove Island are composed? I have; I did so in the presence of Sir George Gipps. We had a couple of men there during dead low-water—neap tides—who sunk a hole nearly six feet deep, and found the Flat to consist of shells—principally cockle. After getting through the shells we found twelve or eighteen inches of soft mud, and then shells again. On the main land we found the strata to correspond with those of the Flats. We took up the stuff to Newcastle, and weighed it, and made a calculation of the quantity it would be necessary to take away from the Flats.

44. *By Mr. Faucett*: These had been beds of the sea before? Yes.

45. The Hunter is an estuary there? Yes.

46. *By the Chairman*: Your opinion is that the present channel in use will be a stoppage-up of those channels at N, N 1, M 1, M, and M 2,—will approach towards Snapper-hole Island and Mangrove Island? Yes; the principal force of the tide is here.

47. Mr. Moriarty states that he finds since the fresh was made it is impinging upon this bed here, on the north-east point of Snapper Island? Where it impinges it throws off the water at an angle of perhaps from 30 to 45.

48. What effect will it have on the steamer channel; will it make it less tortuous, or more tortuous? It will have very little effect; of course if works are to be done, it will be necessary to protect this place.

49. It is stated that all the works will only cost a certain amount of money? These estimates are difficult to arrive at, even by the most able engineers. The estimates of Stevenson and Rennie are generally doubled or trebled, and I believe it is the same in nearly all the Railways carried on in England; not more than one or two have kept within the original amount.

50. If this channel impinges on this mud flat lying to the eastward of Snapper-hole Island, is the water ever likely to force itself down to Mosquito Island and Mangrove Island? I think not.

51. I do not mean a deep channel, but one that would cause the regular channel to be interfered with as to depth? No, I do not think it would. I think these islands are forming outside. I remember them since 1827. They were very different at that time from what they are now; mangrove is growing all about there now.

52. I presume you never made any estimate of the cost of dredging the flats? I calculated what amount of dredging would be required in the first instance; it was given in the Report dated the 30th of November, 1844.

53. So far as I can comprehend, you are of opinion that first it is necessary an embankment should be made from Snapper-hole to Mosquito Island, and that it should be a continuous embankment the whole way? Yes.

54. Secondly, that it would require the whole of the banks lying to the eastward of Mangrove Island and Snapper-hole to be protected? Yes.

55. *By Mr. Faucett*: By sheeting of a particular character? I would not put sheet piling, but gabions and fascines, and the matter obtained by dredging the river should be thrown upon them, and thus an artificial embankment would be formed. The wash of the river would very soon set it till the materials would almost become a concrete.

56. *By Mr. Arnold*: Do you think gabions and fascines better than piling? Yes, I do; because the teredo is so very destructive. I have seen a tree that had been cut down, and fallen into the river, completely destroyed in twelve months.

57. *By the Chairman*: From your frequent use of the word dredging, I arrive at the conclusion that you consider dredging absolutely necessary? It should be done on some system.

- G. B. White, Esq.  
9 Dec., 1856.
58. *By Mr. Arnold*: Dredging and embanking should go on together? Yes, and with the water, instead of against it.
59. *By the Chairman*: What is the usual ebb and flow of the current of the river, supposing there is no fresh? At Newcastle, as it is stated here (*referring to map*), it is two miles, or two miles and a half; higher up the river it does not run so fast, and gets up to a mile, or a mile and a half.
60. Do you think such a current caused by the tides is sufficient to keep any channel open? I do not think it affects the channel very much.
61. It is not of sufficient strength? No; the tidal influence scours to a certain extent—sufficient to carry away the *debris* washed into it.
62. Is it sufficient to keep open the channel when it is dredged? I should say so: but not to open the channel itself.
63. Supposing there is no dredging at all, are you of opinion that the tidal influence is sufficient to scour the channel? No, it is not.
64. Have you any further suggestions to make to the Committee with reference to the embankment of the river? I do not know that I can make any further suggestions, unless I were to go into the matter and again examine the river thoroughly.
65. Have you cause to suppose that the channel has become either deeper or shallower? I know nothing from my own observation, but from what I hear the captains say, there is very little difference. When I go back to Newcastle I will try some of the soundings across at different points. I will go as far as the flats.
66. Do you think that the partial piling they are putting up, and the other they are intending to put up, will have the effect, without any dredging, of sufficiently stirring the present channel? Certainly not.
67. The plan will not be effective? No, it will not.
68. Have you ever taken the depth of the water from Snapper-hole in a northerly direction to Mosquito Island? Yes.
69. What is the deepest water? I see the water marked here 15, 12, 8, 13, 15 feet. It is very deep there. In fact, all the water of the Hunter turns in there.
70. When were these soundings taken? In November, 1844.

Mr. A.  
Livingstone.  
9 Dec., 1856.

Mr. Alexander Livingstone, called in and examined:—

1. *By the Chairman*: You are Harbour Master at Newcastle? I am.
2. You have likewise had command of a steamer trading up and down the Hunter? Yes.
3. And of sailing vessels? Yes; I think I was the first who went up the river in a sailing vessel.
4. Do you know that portion of the river called the Flats? Yes.
5. You, as Harbour Master, laid down the buoys to mark the present channel? Yes.
6. Will you state to the Committee what you consider the depth of the water at extreme low tide? I was up on Friday last, and I found on the Upper Flat, a little below Snapper-hole, that the depth of water had increased about a foot to what it was when I sounded about three months ago, only it has shifted a little off the point.
7. You mean from Mosquito Island? Yes, farther off Mosquito Island.
8. Did you proceed down the river? Yes; I went till I came to the Lower Flats, to the eastward of Snapper-hole Flat, that is where they are putting the sheet piling now. I found the channel had altered a little, and, in sounding, the least I got was six feet nine and seven feet at low water. At one place I found only six feet nine. The channel is very narrow there; but since the piling has been put up it has altered a little.
9. *By Mr. Jones*: It throws it further over towards the north-east shore? Yes.
10. *By the Chairman*: How is the depth of water now, as compared with what you have known it to be for many years? There is more water now than when I first went up in 1823. I commanded a steamer trading there in 1836.
11. Do you attribute this additional depth of water to the recent fresh, or to tidal influence? To tidal influence; the fresh, no doubt, has some influence; but what astonishes me more than anything else is, where such a quantity of earth as that washed from the different farms goes to; for instance, there are seven or eight acres washed away from Mr. Eales' farm.
12. Do you remember the flood of 1830 or 1831? It was in 1831. I do.
13. Had not that the effect of deepening the river? It had, decidedly.
14. Was it considerable, or was the effect merely trifling? Considerable for some time.
15. Do you think that the recent fresh, which has been pretty strong, has had any effect in deepening the Flats? Yes, it must have had, for the current was very strong.
16. *By Mr. Jones*: Do you account for the greater quantity of water you found on the Flats, by the recent fresh? Yes; no doubt it has shifted to a certain extent; but it has somewhat deepened there.
17. *By the Chairman*: What is your opinion with reference to the tortuous nature of the channel—would you prefer to have it as it is, or to make it as straight as possible? I would make it as straight as possible—the less obstruction the better. There was a line I sounded from Snapper Island to Bluff Head, which was almost a straight line.
18. Is it the continuous straight line marked on this plan you allude to? Yes.
19. Is a gentle curve better than the present channel which is so tortuous? My opinion is, that the straight channel is the better one of the two. The more you contract the channel the more you deepen it; for instance, at Raymond Terrace, where the river expands, it is shallow; between Mosquito and Snapper Island it is again broad and shallow—the steamers often ground there.
20. With respect to the management of a steam vessel—do you experience any difficulty in a channel that bends so much as the present one? Decidedly; it must be a great deal more trouble to steer a steamer through a tortuous than a straight channel.
- 21.



21. You could not go at full speed in a tortuous channel, but would be obliged to ease off? Mr. A. Livingstone.  
Yes; because you can take your mark in a straight channel, but you cannot where the river winds so much.
22. When you were up the river the other day, were you at the sheet piling at N? Yes, 9 Dec., 1856  
last Friday.
23. Did you examine it? Yes.
24. What has been the effect of the fresh and the tidal influence there? It is making the tide in the channel a great deal stronger than it was.
25. In the steamer's channel? Yes.
26. What I wish to ascertain is the actual effect of the tide upon the sheet piling? It has given way, and they are now, in my idea, taking a wise course; they are taking ballast from Newcastle and putting it down there, and I have no doubt that will stand. I have no faith in sheet piling, for I think the cobra will very soon eat it through.
27. What were they doing to support the sheet piling when you were there? Taking stones and ballast from Newcastle and throwing them to the bottom there.
28. Do you know at what cost? At three shillings a ton.
29. What has been the effect of the fresh at the northern end of the sheet piling at N—that is the end farthest off from Snapper-hole? The tide runs up very strong there, and seems to make a deeper channel there. Formerly it was very shallow there, now I suppose it is five or six feet deep along the Mosquito side; but it had not gone so far as the sharp point of the bank. Where the sheet piling is, there is no tide only on flood tides.
30. As far as I understand you, it is forming a channel between Mosquito Island and the sheet piling? Yes.
31. What measures will now be adopted to stop the river going into that Mosquito Island channel? By throwing down stones there; that is very easily done, as there is an immense quantity of ballast to be got there.
32. The stones are thrown down at the end of the piling? At the south-west end of the sheet piling.
32. You are now compelled to throw down this ballast to stop this channel? Yes.
33. When you have stopped the current to some little distance, what is your opinion with respect to its still working round? I believe it will.
34. Until the embankment joins from Snapper-hole Island right to Mosquito Island? Yes.
35. You think that will be necessary ultimately? Yes.
36. The sheet piling was to cost about £693. I now find that the ballast, according to Mr. Moriarty's last return, only to protect the foundation, will cost £195 in addition—that is, nearly thirty per cent. more than the original estimate—how much ballast do you think it will require to finish it? I cannot tell; but I suppose we have 800 or 1,000 tons coming into the Port every week.
37. How much of that will it require to make this bank? I could not say. It is very deep—close to the island fourteen or fifteen feet deep; towards Mosquito Island it is shallower.
38. *By Mr. Faucett*: It will depend altogether upon the different depths in the locality? Yes.
39. It will sink some depth into the sand, will it not? I think not.
40. *By the Chairman*: With respect to the end of the piling that is nearer to Snapper Hole—have they been obliged to protect that? Yes, both sides of that.
41. With what? With stones.
42. At first they had piling? Yes; but they found it did not stand, as there is so much weight of tide coming there; over these soft mud-flats there used to be a little tide, but it is now becoming stronger.
43. Will it, in your opinion, force a channel there? Yes, unless prevented by ballast.
44. *By Mr. Arnold*: Do you conceive it to be necessary to make an embankment from that point to that point? (*Referring to the plan.*) I do not think so, for that sandbank is quite free at half tide.
45. The whole of this outlet will require to be stopped? Yes.
46. *By the Chairman*: If you, as a practical man, had to place this sheet piling, would you put it far to the westward of Snapper-hole Island, or would you have kept it to the north-eastern point? I would have had it from the north-eastern point towards the mud-flat in the direction of the channel.
47. You consequently condemn the situation of the sheet piling? I do not like it at all.
48. *By Mr. Faucett*: Does it not appear that the different forces coming down upon that piling, as it appears there, must have a greater effect in washing it away than if the piling were out farther towards the seaman's channel? The strength of the tide is much greater coming through the channel; it would not have been half the weight if it had been the other way.
49. It has, in fact, more force coming upon it, with less resistance than it would have in the position you suggest? Yes.
50. *By the Chairman*: The present steamer's channel is, you say, shallow? It is, in parts; in one part I got only six feet six, that was the shallowest part, but that was only a short piece; the next lead I got was seven feet, and seven feet and a half.
51. The channel is narrow there? Yes.
52. Is the channel narrow only in parts, or throughout the line at present adopted? In parts.
53. You assisted Mr. Moriarty in taking the depths in the line proposed by him? Yes; I sounded, and he took down the soundings.
54. You, therefore, know the depths in the line proposed by Mr. Moriarty? Yes.
55. Can you state to the Committee which, in your estimation, supposing you had to make a channel ten feet deep and a hundred feet wide, would take the greatest amount of dredging? The present line would take more dredging than Mr. Moriarty's. There is good water there, except in one place, where there is only five feet and a half of water.
56. *By Mr. Faucett*: Can you state how many miles it is from Morpeth to the landing-place at Newcastle by the present channel? About twenty-seven miles.
- 57.

- Mr. A. Livingstone. 57. How many miles would it be by the proposed channel? It would shorten the distance about a quarter of a mile.
- 9 Dec., 1856. 58. In fact, it would not considerably shorten the distance? No; the great object in this matter would be to get a straight line, so that the steamers might go at full speed.
59. Would it shorten the time within which a steamer could go from Morpeth to Newcastle? It takes steamers very little time to go a quarter of a mile.
60. *By the Chairman*: Except they get aground? Yes.
61. And they would be more likely to get aground in a tortuous than in a straight channel? Yes. I think this would make a beautiful channel, as straight as an arrow.
62. Is the fresh subsiding? Yes; there is very little fresh now.
63. *By Mr. Arnold*: Am I to understand, on the whole, that in order to make a sufficient channel on the line you approve—Mr. Moriarty's line—it will be necessary to embark from this point to this point (*referring to the plan*), and to dredge at the same time? Yes.
64. The embankment would be of no use without dredging, and dredging would be of no use without the embankment? Of no permanent use.
65. *By the Chairman*: You see there is piling at N, a little bit at M 1, another bit at M, and another at M 2—that is the way it is proposed to be done. Supposing this piling were completed, and no dredging were to take place of any kind, do you think the present channel of the river would be improved—would that be sufficient without anything further? I do not think it would.
66. It would, in fact, be a failure? Yes, I think so. The steamers that go towards Fullerton Cove go with great force.
67. At what rate does the current of the river run in common tides? Three knots an hour.
68. Where do you mean? Just by Snapper Island.
69. I am speaking of the present channel of the steamer—at what rate does the common tide run? Three knots and a half, I think.
70. Mr. Whyte says it runs only two and a half at Newcastle? It goes much quicker here, where the channel is narrow.
71. Have you any further suggestions to offer to the Committee? I strongly recommend the adoption of Mr. Moriarty's proposed channel as the most efficient and the most easily cleared.

THURSDAY, 18 DECEMBER, 1856.

Present:—

MR. SCOTT,  
MR. JONES,

MR. OSBORNE,  
MR. WEEKES,

MR. PLUNKETT.

A. W. SCOTT, ESQUIRE, IN THE CHAIR.

Edward Orpen Moriarty, Esq., called in and further examined:—

E.O. Moriarty  
Esq.

18 Dec., 1856.

1. *By the Chairman*: Have you been down the Hunter lately, Mr. Moriarty? I was down there on Tuesday last—the day before yesterday.
2. The Committee are desirous to know the effect of the currents upon the sheet piling, in particular with regard to the part marked letter N? The effect of the sheet piling has been to divert an enormous quantity of water down the main channel, so much so that I find the difference of level of water on the upper and lower sides of the barrier of piles is equal to  $3\frac{1}{2}$  inches during the ebb of neap tides, and  $7\frac{1}{2}$  inches during the ebb of spring tides.
3. Is that at half tides? Yes, during the strongest part of the ebb, that is about half ebb, the water rises from  $3\frac{1}{2}$  to  $7\frac{1}{2}$  inches higher on the up stream side of the barrier than on the lower or down stream side.
4. That is during an ebb tide? Yes. With a flood there is scarcely the difference of an inch in the level, shewing that but a small body of flood water comes up the western or Mosquito Island channel.
5. The piles come up the western channel and then go up the southern or main channel, what is the result of this? The evident effect of the barrier of piles is to divert an enormous body of water into the present main channel.
6. Will you state to the Committee the effects of the water at the southern and northern ends of the sheet piling? It is perfect slackwater at the southern end, and at the northern end there is a current running clear of the end of the piles.
7. The water is running at the northern end clear of the piles? Yes.
8. Does it form any channel? It would have formed a channel, but I have dropped ballast at right angles, which tends to stop it.
9. Do you think by putting the ballast at right angles you have effectually stopped any channel? I will not say effectually stopped it, because the difference of level between the waters on the upper and lower sides being 7 inches, the water would always find passages—it would tend to run round.
10. If that is so, what other means will you have to resort to, to check these channels? The only means of checking them is to drop a border of ballast from the north-eastern side of Mosquito Island right away to the sheet piling, in order to fix the bank.
11. You propose in your plan to give up the sheet piling at M 1 and M 3? I excluded this from the contract.
12. You misunderstood me—I am not asking you that question. You intend if you throw the ballast from the north-eastern side of Mosquito Island right away to the sheet piling, which you originally recommended at M 1 and M 3? Yes; I propose using ballast instead for the remainder of the work.

13. Have you calculated the amount of ballast you have already used to protect N sheet piling? Yes; it amounts, I think, to about 1,500 tons.
14. Has the quantity you have already used effectually secured that part? Yes.
15. Have you made any calculation with respect to the quantity you would require with respect to the completion of the embankment if it was carried on to Mosquito Island? No. I have made a calculation of the cost of the quantity of ballast it would take to substitute it for the sheet piling, and I find the cost would be £150 less than for sheet piling.
16. That is with reference to the whole of the contracts? Yes.
17. The question is, what is the difference of price between your present plan of stone ballast and sheet piling at M 1 and 3? I have not made a calculation of that, because they were excluded from the contract.
18. Were they not originally in the contract? No, M 1 and 2 were not a part of the contract.
19. I think I read it in your contract, I will not be certain? I think not. M 3 is the only one included.
20. Then what made you insert in the map M 1? That was done before the contract was made.
21. I thought it was eventually done? No; I did not see the use of contracting for them, as I thought it wiser to wait till I should see if the other sections answered the purpose I anticipated from them, namely, diverting the principal body of the ebb waters into the main channel, as in that case I should not have cared to close the small channels at M 1 M 2, as they would have allowed the flood tide to ascend the river more freely; at all events, till the other channel was well opened.
22. Your contract merely alluded to the sheet piling at N 1 and M 3, with respect to the western channel? Yes.
23. What would be the difference of cost between ballast and sheet piling, from the northern end of the part marked N to the northern end of Mosquito Island, doing away with M 3. That would be about 1,320 yards? I should think it would come to about £1,000, at 3s. a ton.
24. Then the difference between that and the sheet piling at M 3 would be £500 in addition to the original estimate? About £500.
25. And also that the ballast used to protect the sheet piling from end to end would amount to £225 more than what the sheet piling cost; this sum, with the difference of £500, would make, say, £725, in addition to the original estimate expended? Yes; I find that by substituting ballast for the other sections, instead of sheet piling, I would be able to do this work at £147 under the present contract, including the cost of the ballast already laid down.
26. If this plan were adhered to, that the main channel now in use is still to be deeper, you would not require any sheet piling at all? No; I would have the ballast laid as I before stated, and it would be as well to let the channel be blocked up as soon as possible.
27. In your calculation have you allowed for the ballast burying itself? Yes, I have allowed two feet.
28. Will you explain to the Committee what would be the effect of the stoppage at N, as regards the main channel? The effect has been to divert a large body of water into the main channel.
29. What is the effect of that—is it to deepen it? Yes, it will deepen it in the soft places.
30. Can you tell what would be about the depth? I have taken some soundings, but it would be rash to say what it would be eventually.
31. Does there appear to be some change in the depth? There does appear to be a difference. It looks a little deeper in some places; but it is too soon to look for any great change.
32. With respect to your new channel—what effect has the ballast on it? It is deeper in some places; but I believe that the principal change in it as well as the other channel, where any has taken place, is principally due to the late violent floods, as it is almost too soon to look for much result from the tidal action.
33. Has it had more effect on your channel than on the old one? I cannot say it has been of much importance.
34. You will observe that the part marked F is about the worst part of that channel—has it been affected by the blocking up of this channel? It has not been much affected by the blocking up of this channel, because only one of the channels have been blocked up. Until we get the whole of these portions which are above it on the river completed it will not be affected to any great extent.
35. Will you state what effect this additional body of water coming down has had on the undulation and windings of the channel—has it straightened it or not? I do not think it has had any effect as yet; in fact it is too soon to look for any effect on the form of the channel. The alteration in the line of current is, however, very distinctly marked, setting from M 3 partly down the main channel, partly down the channel I proposed to open. That portion of the water passing down the main channel seems to run pretty straight from M 3 to section 18, where it infringes on the edge of the bank extending from Snapper-hole to Spectacle Islands, it is then diverted across towards the long bank from which its direction is again changed, giving it a set towards the "Bluff Head;" the line of current in the channel I have proposed, runs throughout in a fair sweep.
36. To judge from your description, it makes a circuitous winding, or kind of sweep? It is a somewhat tortuous course.
37. Are the Committee to arrive at the conclusion that the sheet piling will not be efficient permanently, unless the stone ballast is carried on to the north-east of Mosquito Island? I think eventually the ballast will have to be carried all the way along.
38. Do you find it necessary that the embankment should be carried to the north-east of Mosquito

- E.O. Moriarty Esq.  
73 Dec., 1856.
- Mosquito Island? I think eventually the whole will have to be ballasted, because the bank is soft and the tide will work into it. I should not, however, care to do it now, or until the main channel was well opened, unless I found the current acting too much upon it, as I would be slow to do anything to impede the upward passage of the tidal wave; besides which, the supply of ballast to be obtained at Newcastle is not more than sufficient for the most important parts of the work, just at present; at some future time, when the ballast can be easily obtained, I should like to lay a border of it on those soft banks on each side of the channel, to fix them, and prevent alterations in the latter.
39. I ask you whether it is necessary that the whole should be ballasted? I said eventually it would.
40. Unless the bank was protected the tide would break into it? I think it would be found, in that case, necessary to protect it with ballast.
41. If the present plan was adopted? I think the whole in time will have to be protected; but, at present, there seems to be no absolute occasion for it. I have not, therefore, thought of proposing anything more than what was necessary for the immediate requirements of the navigation.
42. That is the case in all rivers—I do not see how, if the water is drawn here, it can effect the embankment? It would have to be protected at K in that case; and I say the only effectual way to protect the banks will be by laying ballast along the sides of the channel.
43. Do you think now that the rise and fall of the tidal waters is sufficient, not only to keep any channel clear, but to scour out the channel through—I mean the usual tides? I think it would keep it clear. The channel of all tidal rivers is kept clear as high up as neap tides reach by the tidal action, and, on the Hunter, nature has presented us with a magnificent sluicing reservoir in Fullerton's Cove, which will be of the utmost assistance when its currents shall have been properly directed.
44. How can you account for the freshes not affecting it, for they last three or four hours? These freshes in general do not come far down the river.
45. Suppose now there was no flood but simply the action in common—do you think the water is of sufficient velocity to keep the channel clear, much less to scour it out? I think it would be quite sufficient to keep it clear, but not sufficient to scour it out, so as to make a good navigable channel, without the assistance of the dredge to clear the hard spots.
46. But not to scour it out? It would only scour it out where the bottom was soft. You will find in all rivers the bottom is harder in some places than in others. In the River Clyde, for instance, where the rise of tide is double that of the Hunter, it has been found necessary to straighten and deepen the river by dredging. The same in the Thames, the Liffey, the Lee, in fact all rivers which have been improved of late years.
47. With these facts before you, would you recommend the use of the dredge? Most assuredly I would.
48. Would you recommend the dredge to be used now? I think it essential to have the dredge, in order to make a good channel.
49. You think it already essential? Yes.
50. Suppose you were to make a channel of 10 feet deep and 100 feet wide—I think you recommended the employment of a dredge? Yes; but I purposed to make the channel 200 feet wide at the narrowest part.
51. Which of the two channels, the one that exists, or the one you recommend, would require the greater amount of dredging? I have not made the calculation of the difference in cost for 100 feet wide.
52. Which would require the greatest amount of dredging to make these two channels equally deep? The old channel. There would be a difference of 13,000 cubic yards in favour of the channel I propose.
53. The channel you propose would require less dredging? Yes, 13,000 cubic yards less.
54. You are quite positive that the channel would require that amount less dredging? Yes, in order to make them both equally good.
55. Knowing that, and seeing that the embankments would be required on both sides, would you be prepared to advise the Committee to adopt the original plan, or the one you propose? I should recommend the channel I at first proposed; I have seen nothing to change my opinion in this matter.
56. That is your channel? Yes.
57. Would it be more effective? Yes.
58. Would it be cheaper when made—that is to say, to bring it to the same width and depth as the old plan proposes? Yes, it would.
59. Would it also prevent the injuring and breaking its bank and boundary? Yes; the water by having a few sweeps, would not act so injuriously on the banks; but it would have more effect on the bottom; the navigation too would be much easier. It has another great advantage, the tidal action would not be so obstructed in its passage up and down. The channel would have, in this plan, a fair uniform sweep.
60. *By Mr. Osborne:* What are the red lines? They mark the set of the currents.
61. *By the Chairman:* With respect to the sheet piling recommended at L in particular, is there anything to stop the channel there—is it a simple continuance of the sheet piling as far as high water mark? I only propose it to be up to low water mark. There is no object in having the piling higher than the banks.
62. You cannot fix the piling down very low? It cannot be fixed down more than 12 inches above low water mark.
63. With respect to the experience you have gained of this matter, would you recommend any further improvements than those recommended in your original Report—perhaps you cannot answer this question at the moment? It is a question of such considerable magnitude that I should not like to offer an opinion hastily; I have got a clear notion of what the thing would require, but the only thing to be considered is the expense. I do not feel disposed

disposed to recommend any deviation from the plan first proposed, that is, if it is worth the E.O. Moriarty expenditure; if the present or probable future trade on the river is considered of sufficient importance to justify the outlay, (I believe myself it is, and that what is worth doing at all is worth doing well), but, if it should not be so, then the only course will be to follow up the present plan, shutting up the branch channels so as to confine the water, and then leave the rest to nature—following up and aiding her operations where it may be necessary.

64. The expense was estimated by you at £16,000. So far as I comprehended your plan, if you continue the ballast you say it will be cheaper than sheet piling—therefore, £16,000 would very nearly do the work? I think it would finish it.

65. Would it make a channel of 100 feet wide and 10 feet deep, using the Dredge? Yes, it would make a channel 200 feet wide and 10 feet deep.

66. Perhaps you will state the reason why you place the barrier so far westward? I did that in order to throw the flood current clear of the bank, so as to prevent the formation of a new channel at the north end of the pile barrier, similar to that which we had closed.

67. In practice you found the original idea of yours was not correct, and that the slack water caused it to be in fault? As far as I have been able to judge of the effect of closing the channel at N, I look upon it as completely successful, the body of water diverted into the main channel is even more than I anticipated.

68. Would not what you have stated of the ebb tide have the effect of scouring out the channel? I think not to any considerable extent. Of course when there is such a difference in the level of the water above and below the piles as  $7\frac{1}{2}$  inches, some water must find its way round the end of the barrier, but this cannot be prevented, and the very existence of such a difference as  $7\frac{1}{2}$  inches in the level above and below, is the strongest proof that the barrier of piles is working well, as shewing that it obstructs the run of the ebb waters into the western, or Mosquito Island channel by so much.

69. What would be the objection to carrying this line of piling to M2? In the first place it would take so much money—it is much longer. If I carried the barrier of sheet-piling from that point to M2, I was afraid of having a race of water on the foot of it; I calculated that this would be avoided by putting it further westward, and I have a pocket to drop the silt which I expect to get out of this place.

70. You still adhere to your original idea, that your plan is the best and cheapest? Yes, if you want the best navigable channel at once.

71. *By Mr. Jones:* Have you made an examination of the river higher up than the flats?

No. I was instructed to make a survey for about a mile above Fullerton's Cove.

72. You cannot say what obstructions there are in the river between the upper part of the flats and Morpeth? No.

73. You do not know what the original amount was estimated at for securing a channel of 10 feet deep up to Morpeth? I cannot tell; I was not aware that any estimate had been made. I am quite certain of this, that as soon as the channel at the flats is open to a greater depth than it is at present, it will allow the water now dammed up to run off, and thus develop the shallows higher up the river.

74. So that the deepening of the shoals and flats will render it necessary to deepen the shoals that will appear higher up the river? Yes.

75. Can you see any useful operation will be secured by deepening the flats, keeping in mind that nine-tenths of the vessels go up to Morpeth? Before I could answer this question, it would be necessary to know what obstructions there are higher up; but from all I have heard the obstructions are not of a serious character, or likely to be difficult of removal.

76. Although we might lower the river here three or four inches, still it might not have been so injurious in effect in the northern portion of the river? I think you might.

77. What would be the object of deepening this portion over the flats, with a view to admit vessels up the river going to Morpeth, if you do not deepen the river all the way up? None. You should have the same depth of water all the way up. Deepening the water at the flats would have the effect of developing the shoals higher up the river, and then you would have to go to work with the Dredge on them, in order to keep a depth of 10 feet at all times of tide; but by removing the obstructions on the flats only, the flood tide will be enabled to ascend the river more rapidly, and will rise to a greater height, so that where it now rises perhaps only 3 feet it will then rise 3 feet 6 inches or 4 feet; this has been found to occur on the Clyde, where, by uniformly contracting and deepening the channel for 12 miles, the tide is 37 minutes earlier than it used to be, and the top of high water is 10 inches higher at Glasgow than at Port Glasgow, which is 18 miles lower down.

78. Can you give the Committee any idea of the amount of work, to secure a minimum depth of 10 feet from Newcastle to Morpeth? I can not; I think it would take very little work to do so. It is known that the obstructions exist on two spots, Raymond Terrace and Eales' Flat.

79. *By Mr. Plunkett:* What is the extent of your plan? About three-quarters of a mile from the entrance of Fullerton's Cove.

80. From what point? From the entrance of the Harbour.

81. *By Mr. Jones:* After observing the effect of the work so far as it has gone, you still adhere to the opinion that the channel you recommended is the best? I do.

82. And it would be desirable still to carry on the work, instead of retaining the channel now used? Yes; if I had to dredge them both to a uniform depth, I think the new one would be the best; but, as I have before stated, I believe the entire question hinges on the desirability of expending the money it would cost, on the permanent improvement of the river; perhaps before doing so it might be as well to examine into the nature and extent of the obstructions higher up.

83. You think by making the water of equal depth you would be more likely to keep the channel clear? Yes, because there would be a more uniform sweep, and the tidal wave will ascend more rapidly, and will rise to a greater height.

- H.O. Moriarty Esq.** 84. *By Mr. Osborne*: Can your plan be carried out for less money? Yes, part of it can; we are doing so now.
- 18 Dec., 1856. 85. *By Mr. Jones*: On what ground has the plan laid down in your letters been set aside? It has been deviated from on the ground of expense, I presume, because there was only £40,000 voted for the improvements of the Hunter, and a great deal of this money will be required for the wharfs and the Breakwater of Newcastle.
86. *By the Chairman*: The Breakwater has nothing to do with the improvement of the Hunter? It is paid out of the £40,000.
87. *By Mr. Jones*: Do you think the work decided on by the Government will have the effect of deepening the river unless your old plan is carried out? It may; it is impossible to say. A mere tidal action may be sufficient to deepen it, but I do not think it will deepen it to be of much use. The harder parts of the river will resist the water, and the bottom will thus become irregular.
88. Are you aware of the rise of tide? It rises 4 feet 6 inches at spring tide.
89. *By the Chairman*: What is the average? About 3 feet.
90. Would that amount of tide give any scouring power? It would act favourably on the river, and be quite sufficient to keep the channel clear if once made; but, as I have before stated, the estuary of Fullerton's Cove will be made to serve as a great sluicing reservoir.
91. Do you think by any expenditure the river would be deepened without carrying out your plan in its integrity, so as to secure a channel of 100 feet wide and a depth of 10 feet? I think it would be necessary to use a Dredge.
92. Do you see any reason to delay using the Dredge? No; I think the sooner it is used the better.
93. Do you think your plan should be carried out in its integrity, or only a part of it? I think so, but I may be wrong.
94. Do you still adhere to that opinion? Yes.
95. *By Mr. Jones*: Do you hold yourself responsible for the success or failure of the scheme which is now decided on for the improvement of the Hunter, seeing that a portion has been done according to your plan, and a portion has been dispensed with? No, I do not think I can be considered entirely responsible.
96. If your plan was carried out in its integrity, would you have held yourself responsible as an Engineer for the success of the plan? Yes.
97. You feel relieved from the responsibility of the success or failure of your plan by the alterations that have been made since you sent in your report? Of course I cannot be held responsible for the effect of works carrying out only half my plan.
98. *By Mr. Weekes*: Still this is part of your plan? Yes.
99. Only reversing the order in which you would have begun it? I intended to have had a Dredge and worked it by the time the channel was open, at the same time closing the section marked N, in order to drop silt about the piles, which would form the embankment.
100. The work carried on now is not thrown away, although it is not in furtherance of the plan you proposed? There is no deviation except in carrying out the dredging part.
101. *By the Chairman*: There would have been a saving made of some £500 if ballast had been used? On the contrary, it would have cost much more if ballast had been used to close the channel at N, the depth of water being so great (22 feet) it would have required a very large quantity of ballast to reach this height. The quantity of ballast required would increase as the cube of the depth. Thus, although ballast will be cheaper for shallow places, it would come to much more for the deeper places.
102. Would you have saved this sum of £500? We should have saved the ballast about the piles at section N if there had been silt to deposit about them.
103. The ballast would have cost £225—you would have saved that? Yes.
104. *By Mr. Weekes*: You are not responsible now if your plan is not entirely carried out, although a part of it has been carried out? I am not entirely responsible for the ultimate effect of carrying out a part of the plan.
105. This is one part of your plan, if you are to carry out the other part then your responsibility would be in full force? Yes.
106. *By Mr. Jones*: Do you think it possible, Mr. Moriarty, that a professional man, not having visited the spot and made a personal examination of the channel, or become acquainted with all the features of the river, could describe it as efficiently as a professional man who had made this examination? A good deal would depend on their relative degree of ability. A man might be on the spot three or four years and not know anything about it, another man might see at a glance what should be done.
107. Suppose the person sent down to make this survey was a professional and competent man, do you think his opinion, considering the personal examination he had made, should have more weight than the opinion of the professional man who had not made that examination, even admitting that the professional man who had not made the examination possessed superior ability? That is a difficult question to answer. As I have said before, an able man who understood the business would see at a glance more, perhaps, than would ever occur to a man of inferior ability.
108. *By Mr. Plunkett*: Can your plan ultimately be carried out, although not commenced in the order you recommended it? Of course it can; there is nothing to prevent it. There is nothing to prevent the dredging being carried on two or three years hence if it is found that the barriers of sheet piling, or of ballast, as I propose, are not what they are expected to be.
109. *By Mr. Weekes*: This commencement of the work is contrary to your judgment? It is not in the order I recommended. I would have carried out the dredging of the main channel and closing the branch channels simultaneously.
110. *By Mr. Plunkett*: What effect will the sheet piling have on the present channel? I believe it will have the effect of diverting a large body of water into the main channel, and, no doubt, will deepen it.

111. Would it not have an effect on the general level of the river higher up? It will, to some short extent. E.O. Moriarty  
Esq.  
6 Feb., 1857.
112. If that is the case, it will have an effect on the present channel? No doubt it will act on this channel. The water must be from  $3\frac{1}{2}$  to  $7\frac{1}{2}$  inches deeper in it now than formerly during the ebb tide.
113. Will it not be injurious? If I deepen it in this part it must be beneficial—there is more water there now than formerly by 7 inches during ebb tide.
114. You say, although it is higher here than it is there, the passage being compressed, will bring a greater body of water higher up the river? No, only during ebb tides. I explained in flood tides there was not the difference of an inch, shewing that the ebb currents are affected by the barrier of piles, the water being diverted into the main channel, as we anticipated. Yet, the flood currents are not materially affected by it; it does not seem to impede their upward passage in any way.
115. Is there any difference in the level of the river higher up? There is nothing to impede the passage of the water higher up the river.
116. *By Mr. Jones:* As I understand the principle of your plan, you offer no obstruction if the flood increases to any point—with regard to the ebb tide, you are desirous to confine the water to what is called the main channel? Yes, exactly.
117. From your observations you think the flood and ebb tides are about equal? If you prevent the water coming up it cannot come down, and, consequently, cannot act on the bottom of the channel to keep it clear. I have, on this account, been careful to do nothing which could impede the tidal action.
118. So this pile will have the effect of making deep water there? It will.
119. Previously the river had a tendency to throw some deposit on Mosquito Island? Yes; as the tide sets down it would form a deposit here.
120. *By the Chairman:* I forgot to ask you whether you entered into a contract with Mr. Strong for sheet piling at A, B, C, H, L, M, N, that being the only contract complete? Yes.
121. I believe Mr. Strong stated he had got a great quantity of these slabs according to that contract on hand, can you state what was paid for these slabs—the Government will have to take them I suppose? I do not think the Government will have to pay for all of them.
122. Suppose the unfortunate man had paid for these slabs, and got them already? I think it would be only fair to take some of them. I do not think we are bound, through Mr. Strong's mismanagement, to take all that are specified in his tender—the slabs employed in this work which he thought would be sufficient turned out to be insufficient.
123. *By Mr. Weekes:* What was the effect of his mismanagement—were the piles of insufficient length? When I first went across the channel there was only 8 to 10 feet of water in places, and he left the work open until there was 24 feet of water in these same places.
124. Then the piles designed for this particular spot were found to be too short in consequence of the delay in the work? Yes.

FRIDAY, 20 FEBRUARY, 1857.

Present:—

MR. ARNOLD,		MR. FLOOD,
MR. JONES,		MR. SCOTT,
MR. WEEKES.		

ALEXANDER WALKER SCOTT, ESQUIRE, IN THE CHAIR.

Edward Orpen Moriarty, Esquire, C.E., called in and further examined:—(*Vide Progress Report, dated 20th February, 1857.*)

TUESDAY, 24 FEBRUARY, 1857.

Present:—

MR. ARNOLD,		MR. JONES,
MR. FLOOD,		MR. SCOTT.

ALEXANDER WALKER SCOTT, ESQUIRE, IN THE CHAIR.

Merion Moriarty, Esquire, R.N., Port Master, called in and examined:—

1. *By the Chairman:* You are Harbour Master of this Colony? I am Port Master for the Colony, and Harbour Master of Sydney. I came to the Colony as Port Master; but it was found necessary to give me a local designation as Harbour Master of Sydney, in order to carry out some Legislative enactments.
2. You have been at Newcastle? I have, repeatedly.
3. You are acquainted with the harbour there? Yes; I have a very fair knowledge of it.
4. A Petition has been referred to this Committee, praying for the adoption of some means for the prevention of shipwrecks and disasters at Newcastle—I presume you have studied the subject? I have given it a good deal of consideration for the last thirteen years.
5. Will you state to the Committee what you would recommend more especially to be done, so as to prevent shipwrecks and disasters occurring there in future? My opinion is, that there should be, always, near the entrance of the harbour, at least one life-boat, and that

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warps, of sufficient size to heave up to windward any vessel that might be compelled to anchor in a dangerous position, should also be located at the same spot. I also think that if a public winch, such as was recommended years ago by me, and approved of by the late Legislative Council—I rather think money was voted for the purpose—were established there near the boat-house, it would have a double effect; it would enable them, at all times, to heave up the life-boat, and it should be of such magnitude as to be able to heave up a vessel of from six to eight hundred tons well to windward, if at anchor in a perilous position. There should also be, in my opinion, a heavy mooring chain—in point of fact, I sent one down there for the purpose—stretched along the shore at Nobby's, because the danger is always to be apprehended from the winds from the southward and eastward. These should be under the care of one very active man, whose duty it should be to be constantly on the spot, keeping everything in order, and attending to these matters, of course, under the supervision of the head authority of the port, or of any Local Board which might be appointed. Then there is the light-house at Nobby's, which ought to be in course of erection. It should have been erected fifteen years ago; at all events I recommended its erection fourteen years ago. There should be a light-house placed on Nobby's at once.

6. What is your opinion as regards a steam-tug? No doubt a steam-tug would be highly useful. I have no doubt Newcastle should have a steam-tug, and also two steam dredges. Such a vessel as the "Washington" would be highly useful down there, in various ways; or even a still more powerful tug, for, if you are getting steam-tugs, it is desirable to have them of the best description. No doubt such a vessel would be very useful in preventing accidents.

7. Would a life-boat be necessary if there were a steam-tug? I think so. A life-boat could go out in that harbour when a steam-tug could not. I doubt if any steam-tug could have lived in the sea that was out there at the time of the wrecks—certainly not outside Nobby's.

8. I have always found, from the little experience I have had, that a life-boat has no power to get back to windward on account of the sea-way? She should be sent out with a warp attached to her, and veered to leeward. The warps are there if they would only use them.

9. Do you think a life-boat would be useful in any weather? No doubt they should always be at hand. But I have seen gales there that no life-boat would live in. I have seen a sea on the Oyster Bank that no life-boat could live in. The harbour of Newcastle is a very dangerous one indeed.

10. You mean the sea outside? Yes, beyond the entrance. The Oyster Bank is a little outside of it.

11. *By Mr. Arnold:* I suppose you have had experience on the coast of England? Yes, very extensive. I have been out at sea in every gale that blew for ten years.

12. Do you know the coast off Yarmouth and Lowestoft? Very well.

13. Is the sea at Newcastle much heavier than at those places? It is quite as bad.

14. Did you ever know the sea to be so heavy on that coast as to prevent a life-boat from going out? I have seen seas on that coast that no life boat could go through—on the banks. At Newcastle, the other day, our life-boat went right through an awful sea, and it was not till she touched the ground that she was upset.

15. Is the sea ever so high that a well managed life-boat could not live in it? I think so—on the banks—in the surf.

16. Did you ever see mortars firing lines across vessels? Yes.

17. Would not one of those be a useful thing to have at Newcastle? Yes; I was going to suggest that. There are rockets also used for the same purpose.

18. Do you know that the mortar is used both from the shore and from the life-boat? Yes, it might be used from a boat, certainly.

19. Do you believe that, with a well manned life-boat and mortar apparatus, it would be possible, in any sea whatever, to communicate with a vessel? No doubt. The sea would not affect that.

20. *By the Chairman:* I suppose your experience in England was previous to much steam being used? No; I have commanded steamers in England for ten years.

21. Which is most recommended in England, the life-boat system, or the steam-tug system, for saving vessels? Every place had its life-boat, and in every place life-boats occasionally failed.

22. Supposing it could be shown that a steam-tug would be self-supporting in this harbour, would you recommend the adoption of one? If you will excuse me for saying so, I think the idea of a vessel being self-supporting is beneath the consideration of any country in such a case as this. Whatever is right should be adopted, without reference to the expense. The question of expense would not weigh a feather with me in anything I considered essential to the safety of a port like Newcastle.

23. In the Supplementary Estimate for 1855 I find provided for the harbour of Newcastle a chain cable, anchors, buoys, and hawsers, amounting to £853 18s. 9d.—are you aware whether these were supplied? A great many of them were, certainly. I sent down a large chain cable with the view of its being attached along the shore at Nobby's, so that if any vessel came into the harbour suddenly in heavy weather she could fasten on to it.

24. Did you give directions to that effect? I did.

25. Have they been followed out? No; they say they have not the means.

26. To whom did you give those directions? To Captain Livingstone, the Harbour Master.

27. I see there is also in the estimate a sum of money for the hire of a vessel for laying down buoys? Buoys have been laid down, and no sooner laid down than some were knocked to pieces by the steamers.

28. You recommend a winch, and I see that, in 1855, there is an item for a patent winch, £300? Yes; it was voted, but never supplied.

29. Whose fault was that? It is not for me to say what the Government should do.

30. Did they call upon you in the matter? I furnished the plans.



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31. Have you anything to do with the purchase of these things? No.
32. It is done by the Executive Government? It is. I cautiously avoid all these matters.
33. I see, also, a sum set down for a new life-boat, with oars, &c.—£160? Yes; that was the life-boat that was lost the other day.
34. Was there not another one, which proved rather inefficient? Yes; one was thrown on the builder's hands, and he did not get paid anything. The boat did not get fair play; she was not fitted with cork fenders, and so on, at the time she was condemned. The truth was, that, being built in Sydney, the people of Newcastle objected to her, and found fault with every thing.
35. I heard she was capsized? That boat, the moment she filled, discharged herself; I saw her do it repeatedly; but the men who tried on the occasion you refer to clung to her side, and did not give her fair play. However, it was no matter; she was returned to the builder's hands, and not paid for.
36. Do you recommend or object to the appointment of a local authority at Newcastle, for the management of matters concerning the Port? My impression is, that wherever there is any harbour of any importance whatever, there should be local management by Harbour Commissioners, or you could call them what you please; there should be a local authority on the spot. How can I know what is going on at Newcastle or Moreton Bay? I give directions, and the moment my back is turned my directions are not attended to, or not attended to in the way I wish.
37. Is the Harbour Master of Newcastle under your authority? He is.
38. Is he not bound to execute your orders? No doubt he is; but if I give an order, and go away, at the end of three months I find the thing is not done as I wished.
39. Have you no means of remedying that state of things? You will find it a very difficult thing, in any place, to get men who are away from you for three months literally to obey the orders they receive.
40. What should be the nature of this local power—can you make any suggestions—should it be under the Harbour Master of Newcastle, or entirely independent of him? Decidedly not under him; rather over than under him.
41. Of course this local power would have the entire management, not only of the winch and warps you recommend, but also of the steam-tug? Yes; the whole directing power should vest in them.
42. *By Mr. Arnold:* The Harbour Master should be, in fact, a responsible officer under them? Yes.
43. *By the Chairman:* If a powerful steam-tug were sent to Newcastle, I presume it could perform other work than merely waiting in case of shipwrecks? No question of it. I think a powerful steam-tug could earn a great deal of money in towing ships in and out.
44. She could be employed in moving vessels from the various coal shoots, and from place to place, whenever necessary? Yes, and would earn a great deal of money.
45. Probably she would be entirely self-supporting? Probably more; as the trade of the port increases I have no doubt a steam-tug would realize more than its expenses.
46. Would you recommend that a small compulsory charge should be made on all vessels entering the Port of Newcastle, for the maintenance of this steam-tug, or that vessels should pay at a higher rate only when they require her services? This is a difficult question to answer. It seems hard to enforce payment for a vessel whose services may not be required, as in the case of small coasters, the profits on which are inconsiderable, and if such payment was enforced, the service would be insisted on, and would thus, possibly, interfere with a more necessary use of the vessel; on the other hand, the advantages which would result from having such a vessel to assist in a case of necessity would more than compensate for a small charge. Possibly, the case might be met by levying a very small charge generally, with a much heavier one when required; this would ensure that a needless application was not made for the vessel, and would secure her services in all cases of absolute necessity.
47. Are there are not certain winds in which vessels cannot get out of the port? Yes.
48. In preference to being detained, waiting for a fair wind, would they not rather pay for a steam-tug to tow them out? Yes, all large vessels would, certainly.
49. Do you know that large sheet of water near Bullock Island, as you go up towards the Flats? I do.
50. What kind of anchorage is it? Very good anchorage.
51. How are vessels in that sheet of water affected by the winds? No ordinary gale can hurt them if they are properly moored.
52. How many large vessels, ships, and barques, could be accommodated in the harbour of Newcastle at one time? Up in that direction a great many vessels might be moored.
53. I mean in every direction, in safe anchorage, inside Nobby's? The best part of the harbour is, in reality, the part you are now speaking of. That is where the large ships should be placed.
54. How many ships could be moored there? I think about fifty.
55. You are not alluding to vessels alongside of wharfs? No; a vessel at a wharf occupies but a small space, but a vessel at anchor must have room to swing. Some of the vessels that come there now are two hundred and fifty feet long, and they must have thirty-five fathoms each way; and when it is blowing hard they will have to veer to fifty fathoms. However, I am satisfied that the Harbour of Newcastle will always accommodate the number of vessels that will require to go there.
56. If your suggestions as to a life-boat, warps, and a steam-tug, were carried out, you think the Harbour of Newcastle would be rendered comparatively secure? No question of it. It would be an immense improvement.
57. And as such you recommend it strongly? Yes, as strongly as I can find language to do it.
58. *By Mr. Arnold:* Do you know whether any steps have been taken towards furnishing Newcastle

- M. Moriarty, Newcastle with mortars for the purpose of firing lines across shipwrecked vessels? I think not.  
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59. Would you not recommend that they should be furnished at once? I think they should.
- 24 Feb., 1857. 60. *By Mr. Jones:* You were not present at Newcastle at the time the wrecks took place, in October and November last? I was not.
61. You cannot give the Committee any information as to the immediate causes of the wrecks? I cannot take upon myself to give any decided statement on that point. I know the Harbour Master was not there, and I know he ought to have been there.
62. Under whose superintendence are the affairs of the Port of Newcastle at present? Under mine;—that is to say, the Harbour Master at Newcastle is responsible to me; he reports everything to me, but I interfere with him as little as possible; I give him advice, but I do not like to fetter his judgment.
63. In any case of difficulty he has to refer to you, to know what course he is to take? There is nothing to limit his acting on his own authority; the only thing is that he has to report immediately what he does.
64. Do you think it is practicable for an officer at Sydney, who has other duties to perform, to efficiently supervise the Port of Newcastle? I can tell you it interferes with his other duties, and prevents him from being so efficient as he ought to be. At the same time I will say this, that an intelligent man at head-quarters may give a vast deal of good advice to people at these outports, if they would only follow the advice they get.
65. Do you think the affairs of these outports could be better managed by a Board at Sydney? I look upon that idea as all nonsense.
66. You think that whatever may be the evils of having a central officer charged with the management of these matters, those evils would be increased by the multiplication of the number of heads? In my mind it is beyond all question.
67. You think that a Board will not secure the desired advantages? No. I care not how that Board is formed, you cannot get men of equal calibre of mind upon it.
68. You, as the officer entrusted with these things, feel a considerable amount of responsibility? I do.
69. You do not think a Board of four or five persons would feel the same amount of responsibility as an individual officer? I do not believe any Board could ever carry on so well as one efficient head, if he is a man of ability.
70. Your impression is, that the substitution of this Board will only increase the evils which are now complained of at the outports? I do not think a Board at Sydney can manage the outports. I should suggest that there should be Boards appointed at the outports themselves.
71. You are aware that in the Bill now before the House it is contemplated to establish only one Board? I look upon it as so much waste paper. The Board may do a great deal of good in superintending the management of the light-houses, as is done at home, and may relieve the Port Master from a great deal of work that now presses very heavily on him. They will do good in that way, but if they attempt to say where a buoy is to be laid down, or how it is to be effected, or whether a steamboat is to be sent here or there, they will incur expense without understanding what they are about.
72. From your experience, are you disposed to believe that the affairs of the outports will not be efficiently managed until there is a local authority on the spot at each of them? That is my opinion.
73. There should be at each port an officer or Board who should have distinct charge of the port? I think so, in the same way as at home. For example, the Board at London never interferes with the Board at Liverpool, or Cork, or Dublin, or any other port.
74. It comes within your knowledge that the various ports are managed by their own local authorities? Yes. The only thing in which the Trinity Board has a general power, is as to the examination of masters and mates to see to their general competency; and in attending to the Port of London, which extends as far as the Cinque Ports, the Trinity Board has the supervision of all the Lights on the coast of England; the Irish Lights are under the Ballast Officer, Dublin; and Scotland has its Board for the Lights on its coast; and Liverpool has its Board for examination also; so has Bristol, and so has Hull.
75. Do you believe that the various ports in this Colony will be properly managed until some similar provision for local supervision is made here? I think they will not. In fact my opinion is, that the more we adopt the English system here the better.
76. *By Mr. Flood:* Is it your opinion that the Harbour Master at Newcastle ought to be under the control of any officer in Sydney, except the Executive Government? If there is no local Board I think he ought; but, as I have already said, I think there should be a local Board, to whom he should be responsible.
77. If there is a local Board, you think he should be responsible only to that Board? I think so, and that they should communicate with the Government.
78. He should not be in any way under the control of the Port Master at Sydney? No, not when that Board is established.
79. All the Deputy Harbour Masters in the country are immediately under you, are they not? Yes; all their communications come through me.
80. All their movements are under your guidance? They are.
81. You said something, in answer to the Chairman, in reference to a light-house—I think you stated that a light-house ought to be erected at Newcastle? Yes.
82. Are you not aware that a large sum was voted in 1852 or 1853 for the purpose of erecting that light-house? Yes.
83. Have you ever been consulted on the matter? I have given evidence on the spot.
84. Do you know whether the Government have taken any steps towards the erection of the light-house? They have removed the summit of Nobby's with that view.

85. Has there been any correspondence between the Government and yourself, in reference to this light-house, since the money was voted? I believe there have been some letters. M. Moriarty,  
Esq.
86. Can you say whether there is a steam-tug that can be purchased in the Colony suitable for the requirements of Newcastle? There is a suitable vessel in the Colony, but whether she can be purchased or not I cannot say. 24 Feb., 1857.
87. Is the "Washington" a suitable vessel? She is; but I think, if you supply the Harbour of Newcastle with a steam-tug, it would be wiser to build a shorter vessel, with more power, specially for the purpose.
88. Is she worked with two engines? I think she is.
89. Can she work one paddle separately from the other? No.
90. Is not that absolutely necessary for an efficient steam-tug? No, it is not; because by varying the position of the hawser by which you are towing, you can turn her round at once.
91. Would not such an arrangement—a disconnecting shaft—facilitate the movements of a steam-tug in a narrow channel, by enabling her to turn round more rapidly? I do not think it would make much difference.
92. Are not most of the steam-tugs in the mother country constructed in that way? I think not; I never saw one; and I must add, with reference to questions 90, 91, and 92, that I consider it indispensable that a double engine should be attached to every sea-going steam vessel, and that for towing purposes it would be highly improper to let a vessel go into a sea-way with a single engine. I have commanded steam vessels for many years, and I have seen one engine give way several times; there is this great difficulty occasionally in getting the engine over the centre, and if near breakers the vessel had lost her way, she would fall off and be lost. It was in this way the "Sovereign" was lost near Moreton Island. Certainly I think a steam-tug for Newcastle should always be worked by a double engine.

FRIDAY, 27 FEBRUARY, 1857.

**Present:—**

MR. ARNOLD,  
MR. FLOOD,

MR. JONES,  
MR. SCOTT.

ALEXANDER WALKER SCOTT, ESQUIRE, IN THE CHAIR.

Alexander Livingstone, Esquire, called in and further examined:—

1. *By the Chairman*: You are Harbour Master of Newcastle? Yes.
2. You have been there some time? Eleven years as Harbour Master.
3. I believe you were not present when these vessels were wrecked lately? I was in Sydney at the time.
4. Have you made any inquiries subsequently into the circumstances of the wrecks? I have.
5. Will you state what were, in your opinion, the causes of these wrecks? The first was the "Eleanor Lancaster," barque, 487 tons, on the Oyster Bank. She went out of the harbour the same day, and, the wind chopping round suddenly to the south-east, the captain got frightened he would go ashore in the bight; he hove about and came back again, and just as he got to the outer buoy he let go his anchor; but there is not room for a vessel to swing there, and before she got thirty fathoms of chain out, she struck on the Oyster Bank. I asked the captain the reason of his coming back, and he said he was afraid he would get ashore in the bight.
6. *By Mr. Jones*: A south-easter would blow him into that bight? Yes; and a very heavy sea was on.
7. *By the Chairman*: Had you this information personally from the captain? Yes.
8. *By Mr. Jones*: How was the wind when the vessel went out? About north-west, and it went round slap to the south-east.
9. Does it come within your knowledge that the "Eleanor Lancaster" had been ready for sea for some days, waiting for a chance to get out? Yes; she had been waiting a considerable time—I think, nearly a fortnight; she could not get out because the wind was not favourable. When the wind is at north-east, vessels cannot get out.
10. If there had been a steam-tug to tow her out of the harbour, that wind would have been fair for her destination? Yes.
11. The bulk of the trade of Newcastle is with ports to the southward, is it not? Yes, with Melbourne, Hobart Town, and Adelaide. There is also a large New Zealand trade. There are a great number of vessels from Hobart Town just now, but the bulk of the trade is with Melbourne.
12. A north-east wind is a fair wind for these vessels? Yes.
13. But it will not admit of vessels going out of the port? No.
14. If there had been a steam-tug at the Port of Newcastle at any time during the fortnight the "Eleanor Lancaster" was lying there waiting to get out, she would not have been wrecked, but, on the contrary, would probably have reached her destination before the gale came on? Yes.
15. Do you ascribe the loss of the "Eleanor Lancaster" to the want of a steam-tug? Decidedly so; and not only her's, but many others also.
16. Supposing she had only been ready to go out that day, if there had been a steam-tug to have taken hold of her and brought her back when the wind changed and the gale came on, would she have been saved? She would.

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Esq.

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A. Livingstone, Esq.

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17. So that the presence of a steam-tug would have prevented the possibility of her being wrecked, and even if she had gone out that day, the tug could have brought her back into safety? Yes. I have known vessels to be lying there for a fortnight or three weeks unable to get out.

18. *By the Chairman*: Will you proceed with the case of the next vessel? The next vessel is the "Rover," a small schooner, of about one hundred and ten tons. She was well in the harbour, and drove on shore in consequence of having bad ground tackling. She drove from her moorings close to the inner buoy, round what is called Scott's Point, and away into the bight on the north shore. She became a total wreck.

19. *By Mr. Jones*: You ascribe the loss of that vessel to the badness of her ground tackling? I think so, because there was smooth water where she was lying.

20. Supposing there had been a steam-tug in the Port of Newcastle at the time she dragged, would she have had a chance of being towed into safety? She could have been towed in with great ease.

21. *By the Chairman*: What was the next? The next was the "Storm King," a schooner of about one hundred and thirty tons. She drove ashore just in a similar way to the other; but she was got off again; I got her off myself, when I went down. The next is the "Sea Nymph," brig, of about two hundred and twenty tons. She was lost in the bight, about eighteen miles from Newcastle, between Newcastle and Port Stephens. She was thrown ashore in consequence of the vessel leaking and the gale of wind. I may mention that I sent a boat with five men down to her to save the crew. The next was the "Herculean," schooner, of about ninety-five tons. She was not lost at Newcastle; but was run on shore at Port Stephens, the vessel making water and the pumps being choked. She went out of the harbour at Newcastle, and when the gale came on she ran for Port Stephens. The next was the "Currency Boy," lost at Bungaree's Nora, during the same gale; all hands drowned except one man. She left the port the day before. The next was the "Maria Theresa," a schooner of one hundred and forty tons, supposed to have foundered at sea between Port Stephens and Newcastle. We sent down towards Port Stephens to look for the wreck, and we found a portion of her on the beach.

22. Were all hands lost? All hands were lost. At least none of them have been heard of since. These were all that were lost at that time.

23. You have stated with respect to the "Eleanor Lancaster" and "Rover," that those two vessels could have been easily saved if there had been a steam-tug? Yes.

24. The other vessels were wrecked at a greater distance off? Yes.

25. How far were they from Newcastle at the time the gale came on? I know from the captain that the brig was off Port Stephens. He was making for Sydney, and when the gale came on he tried to make back for Newcastle.

26. When he tried to get back to Newcastle, how far was he off? About twenty miles.

27. Had there been a steam-tug could she have rendered any assistance to that vessel? No, she was too far off.

28. Out of the whole number of vessels you have enumerated, how many might have been saved if there had been a steam-tug? Three might have been saved—the "Eleanor Lancaster," the "Rover," and the "Storm King." The others could not have been reached even had there been a steam-tug.

29. Your distinct opinion is that, had there been a steam-tug, three of these vessels could have been saved? I am as positive of it as I am sitting here. I may mention another case in which the vessel could have been saved had there been a steam-tug; I allude to the loss of the "Canmore," a brig of one hundred and eighty tons, two or three years ago.

30. How many men were on board of her? Nine men, and they were all lost but two. The schooner "Jessie" was lost about the same time in 1854, with four men. The men left the vessel in a small boat; and, in attempting to rejoin the vessel when she was in the breakers, getting out of the surf the boat filled, and they were all drowned.

31. Had there been a steam-tug they would have been saved? Yes.

32. If there had been a chain fixed along the shore at Nobby's, with warps and a strong winch, could the "Eleanor Lancaster" and some of the other vessels have been saved? Decidedly not; because when she struck she knocked her rudder away, and if we had had any amount of ropes she could not have been saved.

33. Nothing in the shape of warps and winches could have saved her? No; the sea rolls in there so heavily that no boat could live in it to carry out a warp.

34. That is your decided opinion? That is my decided opinion. I have heard a great deal of talk about it, but I have no great faith in it. Those buoys I have there now are useful enough for vessels to hang by for a short time, but the sea rolls in so heavy sometimes that they cannot lay there.

35. But surely, if these winches and warps were at Nobby's, they would be very useful to assist the steam-tug? No doubt of it.

36. The steam-tug could tow in one vessel, and fasten her to this hawser, and then go for another? Yes.

37. *By Mr. Arnold*: What would be the most ready means of sending a line on board a vessel in times when a boat could not live in the surf? The only plan I can see is by rockets; but I cannot speak from experience of them.

38. Did you ever see mortars used for sending lines on board a vessel? No; but no doubt they are useful things.

39. Do you think that, by means of rockets, a line could be sent on board a vessel entering the Harbour of Newcastle, if she was in danger? I should imagine so.

40. In that case, would there be any difficulty in making use of the chain and hawser? No. A small line could be sent off, and the people of the vessel could pull the hawser on board.

41. The only difficulty is in getting the line on board? Yes.

42. If a line could be got on board by means of a rocket or mortar, there would be no difficulty? No.

43. Would there not be times when it would be impossible to make use of a steam-tug? There would. Perhaps you will allow me to impress it on your minds, that a steam-tug would be of no use unless she is very powerful. A. Livingstone, Esq.  
27 Feb., 1857.
44. *By the Chairman*: There was a sum of money voted in 1855 for the supply of a life-boat, buoys, hawser, and winch —? The winch we never got.
45. Do you know the reason why? I do not.
46. Have you had the hawser? Yes.
47. What have you done with it? I have it in a shed.
48. Where is that shed—at Nobby's? No; there is no place at Nobby's to put it in.
49. Then the hawser is of no use to you? We send it out in a boat when it is wanted.
50. There was a large chain sent down for the purpose of laying down along the northern shore of Nobby's? I have that chain laid down, except about twenty-five fathoms.
51. You have fixed a portion of it for use? Yes.
52. There was a life-boat sent down also? She was sent down, but she is all to pieces.
53. Was there not one sent down before that which turned out to be useless, and was returned on the builder's hands? Yes.
54. Why could you not make use of that life-boat? She was not of a proper construction; she was too straight, and had not sufficient sheer; she was more like a whale-boat than a life-boat. I also found fault with her building—she was put together badly. We expect a life-boat, when she upsets in a sea-way, to right herself, but that one did not do so.
55. When she capsized, did she remain bottom upwards? Yes. We had to get a line fast to her, haul her alongside a ship, and put a tackle on to her; and then we could not raise her, but had to take her ashore.
56. Was that life boat capsized when Captain Moriarty was present? He was present. We capsized her on purpose to show him she would not right.
57. How many men were clinging to her when she upset? Ten Maories and one pilot.
58. Did any of these men cling to her after she was upset? Only one man, the pilot; the New Zealanders were swimming about in the water.
59. *By Mr. Arnold*: Did you experiment on her in any other way? I was so disgusted with her that I brought her in and locked her up.
60. Did you fill her with water? She was full of water then.
61. You did not try whether she was manageable when full of water? I thought we had seen enough of her performances.
62. Do you know anything of the life-boats on the coast of England? They are greatly improved since I was in England. It is thirty-five years since I was there.
63. *By the Chairman*: Then, to sum up your evidence; you think it is indispensable there should be a steam-tug at Newcastle? I do, decidedly; for the safety of the port.
64. And that it would be materially aided by warps and a winch? Yes.
65. And also you recommend that there should be the means of communicating with vessels by rockets or mortars? Yes.
66. Would a steam-tug be self-supporting or nearly so? I have calculated that a charge of four pence per ton would about pay the expense of a steam-tug; and I believe no owner would grumble at such a charge. I would suggest that one of the pilots and a boat's crew should always be on board; let them take it turn and turn about, by the week, or month, according to arrangement. By that means very few men would be required on board the steam-tug—only the Engineer, one or two firemen, and a cook; and let the pilot be responsible during the time he was on board. Then we could tow out twenty vessels in a morning. At present we have great trouble in getting vessels down from the coal shoots to what we call the Horse Shoe, but a steam-tug would tow them down as fast as possible. I have known us to be two or three days in warping a vessel down, when it has been blowing from the north-east. Four pence a ton would come to a very small sum on each vessel.
67. *By Mr. Arnold*: Would that be the payment for being towed out? I would make every vessel pay, above thirty tons, whether she had the use of the tug or not.
68. You think it would be better to make them pay one uniform rate, whether they use the tug or not? Yes, let them all pay a certain amount.
69. You would not make them pay any more if they did use it? No.
70. *By the Chairman*: For this four-pence a ton you would take vessels to and from the shoots, and tow them in and out of the harbour, if necessary? Yes.
71. And it would save them also, at the same time, from the chance of wreck? Yes.
72. If a vessel tailed on, like the "Eleanor Lancaster," would you charge more than four-pence a ton? No, I should not be inclined to do so.
73. Four-pence a ton would be the whole expense? Yes.
74. In addition to the usual pilotage fees, I suppose? Yes.
75. What is the tonnage of the "Earl of Dundonald," now lying in the harbour? 1437 tons.
76. You think the owners would not have any objection to pay four pence a ton on a vessel of that size? I think not.
77. In your opinion, would the employment of a steam-tug render insurances on vessels going to Newcastle less expensive? No doubt of it. They will not insure now, except under a heavy premium. If there was a steam-tug it would reduce the rates of premium considerably.
78. Would there be any difficulty in insuring vessels then? I should think not—not the slightest.
79. How many vessels frequent the Harbour of Newcastle in a twelvemonth, on an average, irrespective of steamers and vessels going up the river? According to a return I have had made out, for the quarter ending 31st December, 1856, there were 90,444 tons; but I must mention that that takes in the Company's steamers going to Moreton Bay and the northward, which call in at Newcastle.

- A. Livingstone, Esq.  
27 Feb., 1857.
80. *By Mr. Arnold*: What number of tons would require the assistance of a steam-tug? I should think about forty thousand tons.
81. *By the Chairman*: Do you think this steam-tug should be placed under the Harbour Master or under a local Board? It would be better if there were a local Board. I think we ought all to be under a local Board. I should prefer it.
82. Do you think the Harbour Master ought to be placed under that Board? Yes. The way the Harbour Master is placed there now is a very awkward position. We have to send to Sydney for everything. If a vessel is in distress we hardly dare send her a rope without writing to Sydney.
83. *By Mr. Arnold*: Have you calculated the expense of a steam-tug? I put it down this way—Master, £20 a month; Engineer, £20; two firemen, £8 each; and one sailor £6. Then a pilot and boat's crew would be always on board; or you would find if you had a crew exclusively for the steamer that it would take sixpence a ton to pay the expense.
84. How much do you calculate for provisions and coals? I think I calculated two shillings a day for each man, and three shillings for the Captain.
85. That would be £18 or £20 a month more? Yes.
86. Then there is the coal—how much would that be? I calculated about four tons a day, on the average—some days there would be more, some less.
87. Say about £90 a month for coal? Yes.
88. How much would you calculate for wear and tear and insurance? I would value the vessel at £10,000, and, I suppose, you must pay about eight guineas per cent. premium for insurance, or say about £800 a year. It would be at the option of the Government whether they would insure or not.
89. What would be the wear and tear? I calculate that at ten per cent., or about £1,000 a year.
90. That would make a total expense of about £3,800 a year, against a return of £2,700, or thereabouts, calculating the amount of tonnage that would have to pay the fee at 160,000 tons annually? Yes.
91. *By the Chairman*: Will not the trade increase if the harbour is rendered more secure? No doubt of it. The great drawback now is that large vessels that go down there cannot get out; they have to lay there perhaps a week or a fortnight; and that, of course, is a great expense to them. I know many vessels would have come there for coals had it not been for difficulties of this sort.
92. *By Mr. Arnold*: You think you have enumerated all the expenses of a steam-tug? Yes, I think so. But if it is thought proper to man the vessel fully, it would take three or four extra men.
93. In fact the steam-tug would act as a pilot boat? Yes.
94. Have you any life-boat at Newcastle now which is efficient? No.
95. Is there any intention of building one? Not that I am aware of.
96. Do you think a life-boat is necessary whether you have a steam-tug or not? Yes, I think so. I think we could get a good life-boat built down there by a man who has lately come out from Scotland.
97. Could you not send a life-boat in places where a steam-tug could not go? Yes; in case of a vessel getting on shore we should have a life-boat to save the crew; we could not send the steam-tug, or she might be lost.
98. Would a life-boat be of much value after a vessel got on shore? Yes, I know she would, because I was once taken out of a wreck myself by a life-boat.
99. In some cases, communicating by a line would not be sufficient? No, I do not think so. We could send a line on board, and then let the life-boat go on board by means of the line.
100. You would communicate, in fact, between the vessel and the life-boat by means of a line? Yes.
101. *By the Chairman*: You recommend a steam-tug whether it is self supporting or not? Yes; but four-pence a ton, I am confident, would pay all expenses and leave a sum for the repairs of the boat.
102. *By Mr. Arnold*: In that case you reckon on a greatly increased trade at Newcastle? Yes, I do; I think it will increase twenty or thirty per cent. Vessels will come from California, India, and the West Coast. So many mines are opening now that they will have coals much cheaper; they talk of bringing them down to ten shillings a ton.
103. Supposing a steam-tug to be determined upon for Newcastle, would you advise that she should be kept entirely for towing vessels in and out of the harbour? Yes; she should not go out of sight. She might tow a vessel over the flats, but she should never go far away, so that if a vessel came in sight of the harbour she could return on being signalled to.
104. Do you think anything would be added to her earnings by work of that description? I think so. She might make an extra charge for it.

Thomas Stevenson Rountree, Esquire, called in and examined:—

T.S. Rountree  
Esq.

27 Feb., 1857.

- By the Chairman*: Have you been connected with shipping? I have.
- For many years? I was captain of a ship for fourteen years.
- You are conversant with docks and dockyards? I am.
- You have something to do with Mr. Mort's Dock? I am manager of Mr. Mort's Dock.
- We have—at least I have, on my own responsibility—asked you to come here, because I thought you could give the Committee some information with respect to the prevention of shipwrecks in harbours—Do you know anything of Newcastle harbour? I have no knowledge whatever of Newcastle; I was never to the north of Broken Bay. I thought the Committee wanted to examine me with reference to the Steam Dredge, which I understand is wanted for the Hunter, or I should have written a note requesting to be excused.

6. Have you ever had any knowledge of steam-tugs in England? I have had a little. (The Chairman here exhibited to the witness a chart of the Harbour of Newcastle, and drew his attention to the peculiarities which render it difficult of ingress and egress during the prevalence of certain winds.)

T.S. Rountree  
Esq.

27 Feb., 1857.

7. So far as you can judge from the circumstances I have just explained to you, would you recommend a steam-tug for the Harbour of Newcastle? I think it is highly necessary in such a harbour as Newcastle, from what I hear of it. I was brought up at Sunderland, which is a bar harbour. Most of the coal trade is carried on there. About thirteen hundred sail pass in and out in the week, and most of the work is carried on by steam-tugs. Nothing could be done without them. I think, belonging to Sunderland, there are not less than forty steam-tugs. On the Tyne there are considerably more; Stockton-on-Tees the same; and Hartlepool also. They go through a great deal of work, without much loss of time, through having these steam-tugs.

8. Do you consider that warps and a winch and chains, placed in a proper position, would assist in the prevention of wrecks? It greatly depends on the locality. Where I come from they would be of no use.

9. Can you give the Committee any information with respect to mortars or rockets for throwing lines on board vessels in distress? Captain Manby's apparatus is very useful. I have seen lines thrown a quarter of a mile off, and the people taken out of a vessel by that means. But to use steam-tugs on a lee shore would be a very difficult thing; it would be a chance if they were not lost.

10. Your opinion is that any harbour, situated as you see Newcastle is, would be much benefited by a steam-tug? No doubt of it. We should never do anything in the ports of the north of England without them.

11. Can you state the cost of steam-tugs? A boat of the description that would be necessary would be very expensive. She would require to be about a hundred and sixty horse power.

12. *By Mr. Arnold:* What would be the prime cost of such a boat? To buy a boat of that description would cost about £8,000 or £9,000.

13. It would be under £10,000? Yes.

14. What would be the cost of working her? From the experience I have had of steam-tugs, I know you could not work a boat of that description under £100 a month.

14. Could she be worked for that? Yes, a boat of that description.

15. Paying men and all? Yes; finding a sufficient crew to manage the boat, and the coals also.

16. Is £20 a month too much for the Master? Yes.

17. What could you get one for? £12 a month. He would live on board the vessel, and get provisions.

18. I suppose a boat of the kind you speak of could be brought out from England? Yes.

19. What would she cost in England? About £5,000.

20. Would she pay her expenses out by carrying cargo? No, I do not think she could do anything of that kind. She would require coals to steam part of the way.

21. *By the Chairman:* Supposing you were told that six or seven vessels were wrecked in one gale, and also that the trade of the port is already to the amount of one hundred and fifty or one hundred and sixty thousand tons annually, with an increasing trade, would you recommend that a steam-tug should be sent there immediately? I certainly think that port should not be without a steam-tug, under any circumstances.

22. Do you not think the trade of the port would increase more rapidly still if it were known that there was a steam-tug always ready to tow vessels in and out of the harbour? If I were captain of a ship I should go there with a great deal more confidence if there was a steam-tug, and I would take a lower freight.

23. *By Mr. Arnold:* Do you know anything of the life-boats that are used at home? We had some very fine life-boats at Sunderland.

24. Ought not a life-boat go out at any time? At a place like Newcastle they could get to sea at any time, but at Sunderland they had to be launched into the surf. Once in the open sea, they ought to be able to live for ever.

25. Have you ever seen Manby's apparatus used for communicating with vessels by lines? I have.

26. What is your opinion of it? It is a very useful and simple thing.

27. *By the Chairman:* Would you recommend that the steam-tug and other apparatus should be placed under the Harbour Master, or under the directions of a local Board? I think there ought to be a local Board.

28. Would you place the Harbour Master under the directions of that Board? Yes.

29. Have you had any experience of the working of local Boards? I have not.

30. Do you know any place where they are instituted? We had a Life-boat Committee where I came from, who managed the life-boat entirely. There are so many pilots drafted out every year; they are obliged to attend, and are paid so much a year for it. The life-boat is always mounted on wheels, and if she is wanted a mile or two away they run her along the beach. But the life-boats there are quite differently constructed to what they are here. The first life-boat they sent to Newcastle was a most ridiculous thing—nothing more than a large surf-boat. The last one was a very fair boat, but I think she was not managed properly, and the pipes were not sufficient to carry off the water.

WEDNESDAY, 4 MARCH, 1857.

Present:—

MR. FLOOD,

MR. JONES,

MR. SCOTT.

ALEXANDER WALKER SCOTT, ESQUIRE, IN THE CHAIR.

Charles Bolton, Esquire, called in and examined:—

C. Bolton,  
Esq.  
4 March, 1857.

1. *By the Chairman:* You are Customs Officer at Newcastle? Yes; I am Sub-Collector of Customs at Newcastle.
2. You have been some time stationed at Newcastle? Nearly twenty years.
3. This Committee is considering the causes of the late shipwrecks at Newcastle, and the best means to be adopted for the prevention of future shipwrecks there—will you state to the Committee what you would recommend? I do not think I can recommend anything better than a steam-tug. It would lessen the chances of shipwreck there very much.
4. Were you at Newcastle when these wrecks occurred? I was.
5. Do you know where the "Eleanor Lancaster" was wrecked? Yes.
6. If there had been a steam-tug would she have been wrecked, or not? She would not, because before she went on the bank she might have been towed in. At the same time, I think the vessel should not have returned when she was once out at sea.
7. Some other vessels were wrecked close to the harbour at the same time? Yes. The way vessels are usually wrecked is, that in attempting to come in with a southerly wind they try to get under the lee of Nobby's, cast anchor, and frequently the gale increases, and they drag their anchors and become wrecks. If there were a tug boat to tow them in when they first cast anchor, they could be brought in out of danger in nine cases out of ten.
8. Then you think a steam-tug would have been the means of saving life and property? Most unquestionably, in nine cases out of ten of the wrecks at Newcastle.
9. In 1855 there were put on the Estimates several items, for a chain, buoys, life-boat, and a winch with warps—what is your opinion with respect to the utility of these? The buoys are a very great advantage in pointing out the channel; but with respect to the winch, which, I presume, is to be fixed on the shore, I confess I think very little of it; I do not think it would do much good.
10. Is it necessary, in your opinion, to have a life-boat? I think so, because it may save life after a wreck takes place.
11. *By Mr. Flood:* A tug-boat would dispense altogether with the necessity for a winch? I think so. A tug-boat would do all that could be done.
12. *By the Chairman:* Do you think a steam-tug at Newcastle would be self-supporting? I think it might be made so by doing away with the pilotage fees, and charging vessels something extra per ton for the use of the tug-boat to tow them in; instead—in fact, making the tug-boat a pilot boat. There would be very little use for pilots if there was a tug-boat, and she might be manned by the present boats' crews. I should suppose that one pilot, besides a pilot on board the tug-boat as master, would be sufficient.
13. Can you give the Committee any information with respect to the amount of tonnage entering and leaving the Port of Newcastle? I beg to hand in an account of the number and tonnage of vessels that have entered and cleared, during the year ended 31st December, 1856, at the Port of Newcastle, divided under three heads—vessels seaward, vessels coastwise, and steamers. (The witness handed in the same. Vide Appendix A.) Here is also another return, which I got from Morpeth. They are not separated, but they are nearly all steamers that go to Morpeth. Perhaps about fifty thousand tons may be set down for steamers. (The witness handed in the same. Vide Appendix B.)
14. Since the beginning of January, 1857, is the trade increasing or decreasing, on the average? I think the trade has been increasing for years, but I have not taken any particular notice of it since the beginning of this year.
15. Are you aware that the rates of insurance on sailing vessels going to Newcastle are affected by the absence of the necessary means of preventing wrecks? I have always understood that insurance on vessels going to Newcastle is high. If there were a tug-boat there the risk would be less, and consequently the rates of insurance would be less.
16. Do you think a powerful steam-tug would be an inducement for more vessels to go to Newcastle? I think it would be an inducement to large vessels to go there, which they will not do now. For instance, two large vessels that went there were obliged to get a tug-boat from Sydney to take them in; they would not venture to enter the port under sail.
17. How did the "Earl of Dundonald" go in? I believe she was tugged in.
18. Did she get a tug from Sydney? Yes, I understood so.
19. *By Mr. Flood:* Can you produce to the Committee a return shewing the quantities and value of the imports and exports from Newcastle in 1856? Yes.—(The witness handed in the same. Vide Appendices C and D.)
20. *By the Chairman:* Supposing the Government were to place a steam-tug, together with a life-boat, &c., in the Harbour of Newcastle, under whose direction would you suggest they ought to be placed? I should assume that the Harbour Master is the proper person.
21. Do you think the Harbour Master is better than a local Board? I think not. I would prefer a local Board.
22. There is a Trinity Board suggested, the members of which should reside in Sydney, to manage the affairs of all the ports and harbours in the Colony—would you reckon that so good as having a local Board? I certainly would not. Whatever authority manages the Port of Newcastle should be in Newcastle itself, so that we should not have to refer to Sydney on every occasion.
23. Would you propose that the Harbour Master and pilots should be placed under the exclusive



exclusive control of the local Board. I think so. Probably the Harbour Master should hold a place at any Board appointed to manage the affairs of the port.

C. Bolton,  
Esq.

24. Has your attention ever been directed to the proposed light-house at Newcastle? Yes.

4 March, 1857.

25. Have you thought in what position you would recommend that the light-house should be placed? I think it should be on the top of Nobby's, because it is separated from the land, and is a prominent object seen coming along the coast; it juts out from the general line of the coast, and is seen at a great distance. It would show the light where I think the light is wanted—where the danger is.

26. Presuming that there will be a series of light-houses along the coast, would you recommend that this, amongst the rest, should be placed under the direction of the general Trinity Board at Sydney? Yes; I think all the light-houses should be under the general Board. You can scarcely term a light-house a local matter.

27. *By Mr. Flood:* To whom should the local Board be responsible? I suppose, to the Executive Government. They would be appointed by the Executive, and, I presume, would be responsible to them.

28. You would not allow the Trinity Board to interfere with them? I do not quite understand what powers are proposed to be given to the Trinity Board.

29. Do you not think it would be better for the local Board to communicate with the Trinity Board, at head quarters, than with the Executive Government? I think a general Board and local Boards might answer together.

30. Each local Board would have the general superintendance of its own harbour? Yes, and no alterations should be made without their approval.

31. Would you recommend that alterations or improvements should take place in the Port of Newcastle, under the superintendance of the local Board, without first submitting them to the Trinity Board, if it be established? I would certainly submit them, because we would then gain information, probably, from men of experience, and it might result in improvements which would not originate with the local Board.

32. *By the Chairman:* Have you ever considered Captain Manby's apparatus for throwing lines to wrecked vessels? Yes.

33. Would it be necessary to have one of these at Newcastle? I think it would be a great advantage; because you have always an opportunity of getting within a tolerable distance of a vessel in distress. To use Captain Manby's apparatus with effect at Newcastle it must be thrown from a boat. In the case of the "Eleanor Lancaster" with Manby's apparatus, a rope might have been thrown to the vessel readily from a boat.

34. *By Mr. Flood:* Not from the shore? No; because the distance was too great, and it would have been necessary to get to windward. There would not have been so much difficulty in reaching the "Eleanor Lancaster," if there had been the means of throwing a line by Captain Manby's apparatus.

35. *By the Chairman:* If there were a steam-tug she could be used to place vessels in their various positions in the harbour, and along the coal shoots? I consider that if a vessel required to be moved after she was first brought in, there should be an extra charge for removal. I think the usual way is, that vessels first come in and anchor, and when they make their arrangements, and get a place alongside the wharf, they are then brought to it. For that I would make an additional charge, and I think it is one the masters of vessels would not object to. It would be a clear saving to them, because now they frequently wait for days for a favourable opportunity.

36. *By Mr. Flood:* From your knowledge of the trade of the harbour, you think a steam-tug would be partly, if not entirely, self-supporting? Partly it would certainly be, if not wholly. If it were amalgamated with the pilot establishment it would not be necessary to have so many boatmen.

37. Your reply is in allusion to the trade as it now stands? Yes.

38. Do you not think that when the Hunter River Railway is in operation, the trade will be much increased, especially when the Railway reaches some distance into the interior, say as far as Singleton? Very much indeed, so much so that I will not venture an opinion on it.

39. At any rate, the steam tug would be self-supporting then? It would. I am not sure it would not be self-supporting now.

40. You are aware that the Legislature passed a Tonnage Duties Act, under which, from the beginning of 1858, a rate of sixpence per ton will be charged on vessels entering the port of Newcastle, in order to defray the cost of improvements? Yes.

41. Are you aware whether there is such a law in existence applying to any other port of New South Wales? I have not heard of any.

42. Do you not think this circumstance ought to entitle persons trading to the port of Newcastle to the accommodation of a steam tug without any further charge? I do not like the tonnage duty at all, because other ports have had their improvements made without being taxed specially. For instance, there is the Circular Quay at Sydney, which has been paid for out of the General Revenue.

43. But as we have the law, and as vessels will be called upon in 1858 to pay the tonnage duty, do you not think it will be a hardship, if they have to pay an additional tax for the use of the steam-tug? I do. I would abolish the first altogether, and charge them for that which they have the benefit of.

44. Until the Tonnage Duties Act is repealed, do you not think those who trade to Newcastle will have a just claim for the use of a steam-tug free of expense? I would rather see the Act abolished, because the duty will apply to steamers, which do not require a tug at any time; but, if the tonnage duty is maintained, I think they should have the tug free.

45. If the tonnage duty law is continued, and coal fields should be discovered at other ports, do you not think it will have a most injurious effect on Newcastle? No doubt of it.

46. You are aware that some of the inhabitants of Newcastle petitioned for this Tonnage Duties Act? Yes.

- C. Bolton, Esq.  
4 March, 1857.
47. Do you know whether they are still of the same opinion with reference to it? At the time they petitioned they felt it was so important a matter that they would rather submit to the tax than not have the improvements which it was intended to carry out; but it did not follow from that that they considered it just.
48. Did they not, when they petitioned, yield up their right to have a fair share of the General Revenue appropriated for the improvement of the Port of Newcastle? I think not. I think they did it because they were denied their right.
49. Do you know whether they petitioned at any time to have the port improved, out of the General Revenue? I am not aware of that.
50. I suppose, in reference to what you said about the steam-tug being attached to the pilot department, you do not contemplate dispensing with the present pilot boats? They will always be necessary to fasten warps, and, perhaps, for casting out anchors, and so on; but I think there might be a pilot less, decidedly.
51. How long have you known ships to lay at Newcastle waiting for a fair wind to get out? A week.
52. Do you recollect a large American ship that was there, I think about the beginning of last year—was she not a fortnight or three weeks lying wind-bound after she was loaded? I do not recollect. It was so constant a cause of complaint that my attention was not drawn to particular instances.
53. Do you believe there would be any difficulty in finding a number of gentlemen to form a Board to manage the Port of Newcastle? I do not think so. I have no doubt a competent local Board could be obtained.
54. Are they making any improvement just now to the quay at Newcastle? None. The damages done to the wharf have not even been repaired.
55. Do you believe these matters are neglected in consequence of there being no local body to look after them? I think so. But, unless the local Board have funds placed at their disposal, they can be of very little use.
56. *By the Chairman:* If the Committee have omitted to question you on any point that occurs to you, will you have the goodness to mention it? I do not recollect anything else, except that in the event of a tonnage rate being fixed, coasters should not be charged the same amount as sea-going vessels for the use of the tug, inasmuch as they do not draw the same amount of water, and run less risk than larger vessels.

## APPENDIX A.

NUMBER and Tonnage of Vessels that have entered, and cleared during the year ended 31st December, 1856, at the Port of Newcastle.

	INWARDS.		OUTWARDS.	
	No.	Tons.	No.	Tons.
Vessels seaward . . . . .	256	44,469	335	59,978
Do. coastwise . . . . .	744	60,579	702	52,821
				112,799
Steamers . . . . .	293	76,288	293	76,288
	1,293	181,336	1,330	189,087

## APPENDIX B.

## MORPETH.

RETURN of Vessels Coastwise, entered, and cleared, inwards and outwards, from 1st January to 31st December, 1856.

	No. of Vessels.	Amount of Tonnage.	No. of Men in Crews.
Inwards . . . . .	492	63,746	7,168
Outwards . . . . .	570	75,755	8,182

Customs, Morpeth,  
12 February, 1857.

J. ALLMAN.

## APPENDIX C.

VALUE of Articles imported at the Port of Newcastle, during the year ended December, 1856.

C. Bolton,  
Esq.  
4 March, 1857.

From New Zealand .....	£340 0 0
Foreign States .....	6,344 0 0
Elsewhere .....	16,316 10 0
	<hr/>
	£23,000 10 0

## APPENDIX D.

GOODS Exported from the Port of Newcastle during the year ended the 31st December, 1856.

ARTICLES EXPORTED.		ESTIMATED VALUE IN POUNDS STERLING.										
Description.	Quantity.	To Great Britain.	British Colonies.		South Sea Islands.	Fisheries.	United States of America.	Foreign States.	TOTAL.			
			New Zealand.	Elsewhere.								
			£	s.	£	s.	£	£	£	s.		
Bran .....	421 tons	....	250	0	2,945	10	..	..	..	3,195	10	
Butter .....	244 lbs.	....	7	0	15	0	..	..	..	22	0	
Candles .....	765 cwt.	....	..	..	2,343	0	..	..	..	2,343	0	
Carts and Drays..	1 in No.	....	..	..	15	0	..	..	..	15	0	
Cement .....	200 cases	....	..	..	60	0	..	..	..	60	0	
Cheese .....	15,730 lbs.	....	..	..	745	0	..	..	..	745	0	
Coals and Coke ..	71,888 tons	....	319	10	49,309	15	321	..	976	1,135	52,061	5
Flour and Bread..	19 tons	....	..	..	450	0	..	..	..	450	0	
Biscuits .....	30 cwt.	....	..	..	82	0	..	..	..	82	0	
Fruit—												
Oranges .....	37 pkages	....	..	..	87	0	..	..	..	87	0	
Furniture .....	24 ditto	....	..	..	80	0	..	..	..	80	0	
Grain—												
Barley .....	48 bushels	....	..	..	10	0	..	..	..	10	0	
Maize .....	92,751 bushels	....	76	0	15,199	10	..	..	..	15,275	10	
Hay .....	24½ tons	....	..	..	115	0	..	..	..	115	0	
Live Stock—												
Horses .....	188 head	....	2,927	0	..	..	..	..	..	2,927	0	
Horned Cattle..	320 ditto	....	2,077	0	..	..	..	300	..	2,377	0	
Pigs .....	105 ditto	....	..	..	175	0	..	..	..	175	0	
Sheep .....	7,287 ditto	....	3,717	0	..	..	..	70	..	3,787	0	
Onions .....	5 tons	....	..	..	39	0	..	..	..	39	0	
Potatoes .....	13 ditto	....	..	..	30	0	..	..	..	30	0	
Provisions—												
Beef .....	233 cwt.	....	300	0	98	0	..	..	..	398	0	
Shovels .....	5 dozen	....	..	..	13	0	..	..	..	13	0	
Soap .....	320 cwt.	....	..	..	570	0	..	..	..	570	0	
Timber—												
Sawn .....	65,758 feet	....	..	..	1,019	0	..	..	..	1,019	0	
In Log .....	59,408 ditto	....	..	..	1,316	0	..	..	..	1,316	0	
Felloes .....	1,033 in No.	....	..	..	15	0	..	..	..	15	0	
Oars .....	108	....	..	..	10	0	..	..	..	10	0	
Pick Handles..	2 dozen	....	..	..	2	0	..	..	..	2	0	
Posts .....	209 in No.	....	..	..	10	0	..	..	..	10	0	
Spokes .....	45,103 ditto	....	..	..	758	10	..	..	..	758	10	
Wheel Boxes ..	203 ditto	....	..	..	2	0	..	..	..	2	0	
Naves .....	40 ditto	....	..	..	16	0	..	..	..	16	0	
Tobacco .....	400 lbs.	....	..	..	7	0	..	..	..	7	0	
Total Exports for 1856 .....			9,673	10	75,537	5	321	..	976	1,505	88,012	15
Total Exports for 1855 .....			9,245	0	79,065	4	398	..	2,347	1,335	92,390	4

John Bingle, Esquire, called in and examined:—

1. *By the Chairman*: You have been long resident in Newcastle? Thirty-six years.
2. You are Lloyds' Agent there, I believe? I am.
3. And you are also Chairman of the Chamber of Commerce at Newcastle? Yes.
4. You have been examined before a Committee of the Legislative Council on Shipwrecks? Yes.
5. Were you at Newcastle during the recent wrecks? I was not; that was the time I was being examined.
6. You have made every inquiry, I suppose, into the circumstances of those wrecks? Yes.
7. And you know the positions of the various vessels that were wrecked? Ycs.
8. Do you think those vessels would have been wrecked had there been a powerful steam-tug to have gone immediately to their assistance? I am sure they would not.

J. Bingle,  
Esq.  
4 March, 1857.

- J. Bingle,  
Esq.  
4 March, 1857.
9. Would not the saving of property and life have been very considerable? Very considerable. If we had had a tug-boat for the last few years there would have been a great saving of property and life also.
10. The insecurity of the port, from the absence of this auxiliary, has rendered the rates of insurance on vessels visiting it much higher than they would otherwise be? Two of the principal companies will not take vessels at all going to the port of Newcastle—the New South Wales Marine Insurance Company, and the Australian General Assurance Company.
11. You are aware of that as a fact? Yes; we are the agents. They will take produce. I suppose the insecurity of the port is the cause of it.
12. If there were a powerful steam-tug you think these companies would then insure? Yes. It is only within the last few months they have withdrawn.
13. Since the late wrecks? No, previous to the late wrecks. The Australian withdrew about twelve months ago, and I think the New South Wales about six months ago.
14. The Government have sent down two life-boats lately, have they not? Yes, I believe they have. One was a failure, and was sent back; but I never saw her, and therefore cannot speak of my own knowledge. The other life-boat was lost, and there was an inquiry, of which I was chairman. That was at the time of the late wrecks, when the "Eleanor Lancaster" was lost.
15. Will you state what was the result of your inquiry—what conclusion you came to as to the reason of the loss of the life-boat? The minor fittings were deficient; I do not believe the valves ever worked properly; and the grummets were rotten; or else the boat itself was a good boat, I believe. It was not to be supposed that, after being turned over in the surf the day previous, she would be fit to go out again. It was imprudent to take her out. However, the poor fellows were hanging on the wrecks at the time; no one was there to give instructions; and I suppose the people were in hopes she would behave better.
16. The trade of the Hunter is very considerable? Very considerable. I think our return for Lloyds' was sixty-eight thousand register tons of shipping, from the first of January to the first of November, not including coasters.
17. Nor steamers? There are some of the outside steamers included—the Moreton Bay and Wide Bay steamers; they are reported to me, and of course the report goes in to Lloyds'; but none of the other steamers—only what we call ocean steamers.
18. Do you think there is sufficient shipping tonnage to make this tug nearly self-supporting, if not quite so? Yes, quite. They have the estimate of the tonnage for the year; it is very easy to ascertain what the expenses of the tug would be, and put on a tonnage duty in proportion. I should say from four-pence to six-pence a ton would pay all expenses.
19. Have you ever calculated what the working expenses of a tug would be? We did go into it, but I cannot tell you from memory. A sixpenny rate would pay it all. The expenses of the tug would be materially diminished, because no doubt both the companies would supply her with coals at a moderate rate, for their own benefit. I should propose to place her under a local Board, and also the Harbour Master and the two pilots. One of the pilots ought always to have her in charge, and his boat's crew could work her.
20. You think there ought to be a local Board for the management of the harbour altogether? Yes.
21. To whom ought this local Board be answerable—do you think it should be responsible to a general Board at Sydney? How would you do if you gave us a Mayor and Corporation? Would you put us under the Mayor and Corporation of Sydney? To whom can they be answerable? All the local Boards in England—at Liverpool, Shields, Hull, and other places—are independent.
22. Are they not under the Trinity Board of London? No.
23. You would recommend, of course, that there should be a light-house at Newcastle? Yes.
24. Would you place that under the local Board, or under a general Board? I think the light-house should come under the general Board, because they correspond with Van Diemen's Land and Victoria, and it is a general thing.
25. Where would you recommend the light-house to be placed? Of course it is desirable to have the light seen as far as possible out at sea. It is a port that no vessel should ever go into at night. I should put it where the obelisk is.
26. On the hill? Yes.
27. *By Mr. Jones*: That is the highest point near to Newcastle? It is, and it can be seen furthest off at sea. I should put a light on the Queen's Wharf—a coloured light—so that it would be a guide to steamers coming in at night. The light-house, placed where I propose, on the obelisk hill, and the light on the Queen's Wharf, brought into one, would be a leading mark right up to the Queen's Wharf.
28. *By the Chairman*: At the end of the Queen's Wharf you would have a lantern? Yes. It would serve for the steamers, and, if vessels were obliged to come in at night, by keeping the two lights in one, they would pass all the rocks and shallows.
29. You stated that no vessel should attempt to come into the harbour at night—you mean, of course, sailing vessels? Yes. It would be imprudent for a man to do so.
30. Could not a steam-tug go out and tow vessels in at night? I do not think it would be necessary. The steamer's work could be all done from daylight to dark.
31. In an emergency—for instance, if heavy weather were coming on—could not the steam-tug tow in a vessel at night, by keeping these two lights in one? Yes; she would have a leading light, of course.
32. With the two lights you talk of, the steam-tug could bring in any vessel? Yes, or any vessel could come in if she had a leading wind. It is very desirable that vessels making the port should see the light as soon as possible. The great mistake that vessels make in coming to our port is, running too close in, and they get into the bight, which is a very deep one, as you are aware. Now, if a vessel coming down with a southerly wind were to sight the light twenty miles off, the captain, if a prudent man, would lay his vessel to until daylight. That
- is

is the very wind a vessel cannot come into the harbour with ; but, if they come too far down, they must attempt it, or go ashore in the bight. But, by seeing the light a long distance off, vessels can lay off until the weather moderates.

J. Bingle,  
Esq.

4 March, 1857.

33. Supposing a steam-tug is granted, would you consider a life-boat necessary also? No; the pilots' whale-boats would be quite sufficient.

34. Would you consider a powerful winch placed at Nobby's necessary? I do not think it is of any great importance myself. The buoys are laid down now, and any vessel getting in and anchoring there can get a hawser to a buoy and warp themselves into safety.

35. *By Mr. Jones:* How do you propose to man the steam-tug? By a pilot's boat's crew, as the vessel would always be in charge of one of the pilots.

36. So that you would require very little more force than you now have to conduct the pilot and harbour service? No; she would be part of the establishment.

37. Her crew would consist of the men now engaged in pulling the pilots' boats? Yes. I think the boats would still be necessary, because we often have five or six vessels coming in together, and although the steam-tug might put pilots on board the different vessels, she could not tow them all in at once.

38. She would not involve an increase to the force, beyond the engineer and a fireman or two? That would be all. I think the coal companies would be very glad, for their own benefit, to supply her with coal at a moderate price, each finding a proportion; say the price is fifteen shillings a ton to the public, I have no doubt they would do it for ten shillings. A steam-tug is indispensable, and with her we should have as good a port as any of the second-rate ports in England, or anywhere else.

39. *By the Chairman:* You reckon Newcastle not a difficult port? There are very few ports in England that are better. Newcastle is superior to all the northern ports—Shields, Hull, and all of them.

40. *By Mr. Jones:* You consider that a steam-tug is really necessary for the preservation of life and property? I do; I think it is the only saving of it.

41. You think it is almost as indispensable, in fact, to make the port secure, as the erection of a light-house? Yes, quite.

42. Have you ever calculated what the power of a steam-tug for that port ought to be? I think a tug similar to the "Washington" would be quite sufficient. She brought down the "Dundonald" lately, and she could have been purchased at one time for £5,000.

43. What is her power? I think it is sixty-horse.

44. *By the Chairman:* Do you think that is sufficient? We would be very glad to have a vessel of her character, at any rate. We should think ourselves very well served if we had such a vessel.

45. *By Mr. Flood:* Do you not think it would be better to send to England for one? If you are going to send to England I should say, get a better one; but if you are going to take what you can get here, I think the "Washington" would do. Of course the more powerful the vessel the better; but she would answer for us in the meantime. Of course I should wish to see a good one there, fit to go out in all weathers. The "Dundonald" was waiting a week to be taken out this time for want of a steam-tug.

46. I think you stated you would prefer the Obelisk hill for the light-house? Yes.

47. You have also given us the reasons why you select that site in preference to Nobby's? Yes.

48. Do you think that Captain King and Captain Lamb are competent authorities for the position of a light-house? I should suppose so, from their standing in the service; but you never find men in any service that will not differ. You can use your own judgment on my reasons. I think a light-house on Nobby's would be like a gas light in any man's eyes, walking along the street; he cannot see anything but the light.

49. Is the obelisk hill at a great elevation? Yes.

50. Above the Nobby? Yes.

51. How much? Very considerably. I cannot say how much.

52. Do you know whether it is or is not considered an objection, by nautical men, to have a light at so great an elevation? There is a question upon that. But although that objection may apply to the fogs in the English Channel, it does not apply here, where there is not a fog once in six months.

53. Are you aware that a Committee, of which Admiral King was Chairman, consisting of Colonel Barney, Captain Lamb, Dr. Alick Osborne, who was once a surgeon in the navy, and others, recommended Nobby's as the best site for the light? I am aware they did so, and I am aware that Nobby's would not be in existence now if we had not made a great stir about it; they had mines and gunpowder already placed to destroy it.

54. You do not agree with Captain Livingstone, the Harbour Master of Newcastle, in his answers to questions Nos. 5 and 6, of his evidence, as given before that Committee, as follows:—  
"5. Where do you think is the best position for a light-house? On Nobby's Island. 6. "Do you think Nobby's, as a position for a light-house, superior to Signal Hill? I think so. "It lies further out, and is nearer the danger. I think the light ought to be there, and the "Signal Station where it is." You do not agree with that? No; the light-house, of all places, ought to be seen as far off as it possibly can be seen at sea. There are other guides to get into the port besides the light-house. Look at Sydney; the light-house is put on the most elevated spot, but it is no guide into the harbour. If they had intended it as a guide into the harbour, they would have put it on the North Head. However, it is a matter of opinion. You can judge if my reasons have any weight.

55. Is not the Nobby the most prominent headland you have near the Port of Newcastle? It is.

56. Your objection is that it is not sufficiently elevated? Yes. And a light there would not be so well placed, because the other would give a leading mark into the harbour. A light on the Obelisk hill would be a leading mark with a light on the wharf to vessels coming in,

J. Bingle,  
Esq.  
4 March, 1857.

in, right up to the wharf, in deep water. A vessel obliged to come in, by taking these two lights into one, could come in safely without a pilot.

57. You stated, in answer to a question put by the Chairman in reference to a tug-boat, that you thought a duty of from four-pence to six-pence a ton on the shipping would pay all the necessary expenses of the maintenance of that boat? Yes, after her first cost.

58. Do you think that persons trading to Newcastle ought to pay any additional tax for this purpose, after the Tonnage Duties Act, passed last Session, comes into operation? I think that was the most iniquitous law that ever was heard of.

59. Supposing that Act, which has been suspended until 1858, comes into operation then, do you not think that persons trading to the Port of Newcastle will be entitled to be accommodated with a powerful steam-tug without any further charge? It is a very heavy charge, but still I think they would prefer to pay it rather than be without a tug. Those tonnage dues ought never to have been imposed on the port. The money is not expended on the port, but strangers are coming to pay for our improvements on the river. I never heard of a more unjust tax. We are as much entitled to a portion of the General Revenue as those in Sydney, where all the improvements have been made out of the General Revenue. The tax falls very hard on strangers. The money is going to be appropriated to the river, not to the port.

60. *By Mr. Jones*: I suppose you are aware that it is not contemplated to apply the whole of the money to the river, but a portion of it to the improvement of the port itself? You should put duties on those that go up to Morpeth, to pay for the improvement of the river.

61. *By Mr. Flood*: You think it unjust that persons trading to Newcastle should be called upon to pay this tax? I call it unjust altogether.

62. But you are quite prepared to pay tonnage dues, to provide funds for effecting your own improvements, if all the ports in the Colony do the same? Yes.

63. *By Mr. Jones*: You conceive that the injustice arises from the fact of the duties being imposed on Newcastle, when all other ports are exempt? Yes.

64. While other ports have been improved largely out of the General Revenue? Yes.

65. You think tonnage dues ought to be imposed on all ports where improvements are going on? Of course, if other places are taxed, then we cannot grumble; but even then we should not be on a footing with Sydney, where everything has been done out of the General Revenue.

66. *By Mr. Flood*: In what state is the quay at Newcastle? It is not in a very good state. It is neglected because there is no one to look after it. In fact, there is nobody in the place to represent anything.

67. You are not aware whether any demand has been made on the part of the authorities? There are no authorities that can do anything. If you see a hole in the middle of the town, there is no one to fill it up. The Police Magistrate will tell you he has nothing to do with it; and Mr. Lewis, the Clerk of Works, says he has no means. There is no one to apply to at all.

68. If you had a municipality at Newcastle, could such a body as that also superintend the port? Yes; I should say so.

69. Do you believe that those who petitioned for the introduction of the Tonnage Duties Act are still of opinion that it ought to be imposed? There were none of them who had to pay the duty themselves, out of their own pockets; and those who were to pay did not know anything about it.

70. You consider that the petitioners had very little interest in the matter? None whatever. They had no ships coming backwards and forwards, and were not connected with shipping.

71. Altogether, you consider it a most iniquitous law? I do.

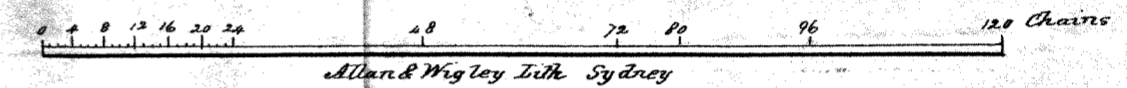
72. *By the Chairman*: Have you anything further to add, from your experience, relative to shipwrecks, and their future prevention? No; not if there is a steam-tug.

73. *By Mr. Flood*: Can you give the Committee any idea of the cost of a steam-tug, with the necessary appliances? I know the "Washington" could have been bought for £5,000 at one time; but I suppose it would cost from £7,000 to £10,000 to get a vessel out from England.

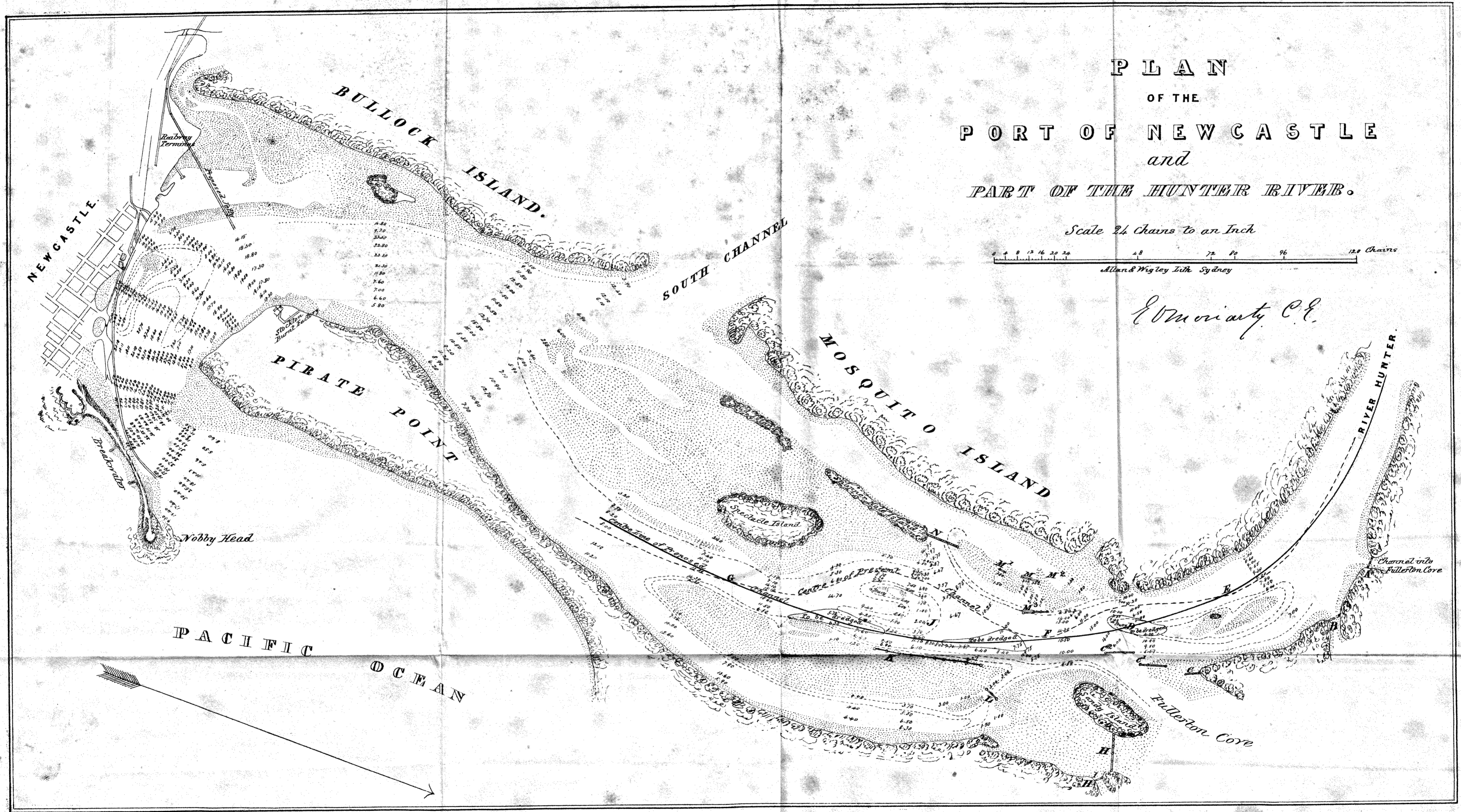
APPENDIX. A

PLAN  
OF THE  
PORT OF NEWCASTLE  
and  
PART OF THE HUNTER RIVER.

Scale 24 Chains to an Inch



*E. M. Viarty C.E.*



(APPENDIX. B.)

**FLATS OF THE RIVER HUNTER**

*Sections shewing the Alterations which have taken place in the Channel since  
the commencement of the operations.*

19

LOW WATER LINE.

West

East

*The Black Lines show the soundings  
first taken  
The dotted Lines show the soundings  
taken Nov. 22<sup>nd</sup> 1856*

20

LOW WATER LINE.

West

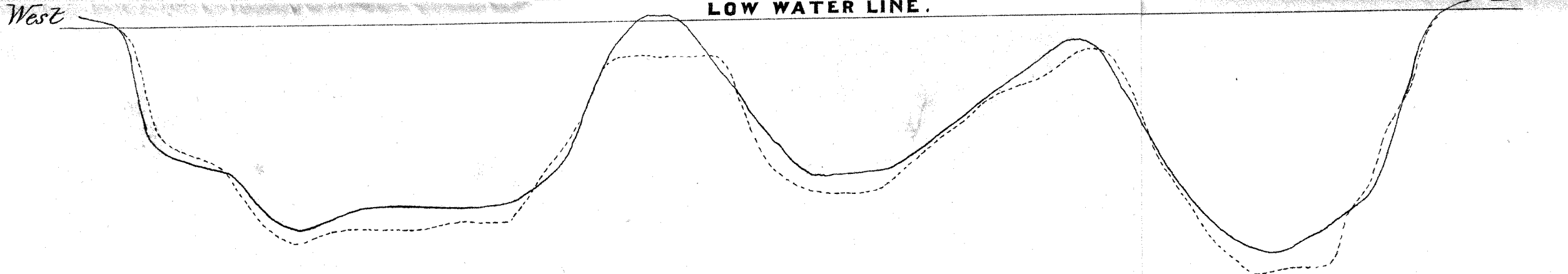
East

21

LOW WATER LINE.

West

East





1856.

## NEW SOUTH WALES.

## RIVERS MURRAY AND MURRUMBIDGEE.

*Ordered by the Legislative Assembly to be Printed, 16 September, 1856.*

RETURN to an *Order* of the Honorable the Legislative Assembly, dated 12th August, 1856, for—

“(1.) Copies of all Correspondence that may have passed  
“ between the Executive and the Crown Lands’ Commissioners  
“ for the Murrumbidgee and Lower Darling Districts, relative  
“ to the Expenditure of the Money voted last year for clearing  
“ the Channels of the Murray and Murrumbidgee.

“(2.) A Return of all the Customs’ Dues on Goods conveyed  
“ up the Murray, that have been received in the Treasury of  
“ New South Wales from the Government of South Australia.”

## SCHEDULE.

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## RIVERS MURRAY AND MURRUMBIDGEE.

No. 1.

F. CADELL, Esq., to THE COLONIAL SECRETARY.

*River Murray Navigation Company,  
Goolwa, 30 November, 1855.*

"SIR,

It having been intimated to the Directors of the River Murray Navigation Company, by Mr. Geo. Macleay, that His Excellency the Governor General has been graciously pleased to accede to his Motion for placing on the Estimates the sum of £1,000 for clearing the River Murray, and also the sum of £1,000 for clearing the Murrumbidgee, such sums to be expended by the River Murray Navigation Company, under the superintendence of the Crown Lands Commissioner of the District,—I have the honor to request, as Manager of that Company, that you will favor me with instructions, in the event of the vote being passed by the Legislature.

My reasons for thus troubling you must be attributed to a desire to take the *earliest advantage of the dry season*, which is of *short and uncertain duration*; for immediately on receiving your assurance that such sums could be calculated upon, prompt steps would be taken in the organization of the parties who are to perform the work.

The Directors of the River Murray Navigation Company fully appreciate the interest His Excellency has taken in facilitating the capabilities of the river in question, and are anxious to secure the greatest results from the expenditure of the sums placed on the Estimates.

I have the honor to enclose copy of a letter from me to George Norman Lockhart, Esq., Crown Lands' Commissioner of the Murrumbidgee District, on the same subject.

I have, &amp;c.,

F. CADELL.

THE HONORABLE  
THE COLONIAL SECRETARY,  
New South Wales.

[Enclosure in No. 1.]

*River Murray Navigation Company,  
Goolwa, 30 November, 1855.*

"SIR,

I have the honor to address you relative to the motion of Mr. George Macleay, "That an Address be presented to the Governor General, praying that a sum of £1,000 be placed on the Estimates for clearing the Murray River, and that a similar sum of £1,000 be also placed on the Estimates for clearing the Murrumbidgee River, the said sums to be expended by the River Murray Navigation Company, under the superintendence of the Crown Lands' Commissioner of the District."

As the rivers are now in such a state as to justify the commencement of operations, it is desirable that an understanding be at once arrived at as to the plans by which this important undertaking is to be carried out.

With your permission I would advance my course of procedure. "That immediately upon receiving a satisfactory communication from The Honorable the Colonial Secretary of New South Wales, or from yourself, I at once proceed to organize my parties with their necessary equipments at Albury and Gundagai. The parties would, most likely, consist of say eight or ten men, including an officer, furnished with crosscut saws, falling axes, tackles, and a team of horses, &c., &c., and descend the rivers in two flat bottomed boats or punts."

As I am of opinion that the judicious application of fire will be found an important auxiliary in clearing the fallen timber, in a future communication I purpose to request your sanction for burning the snags, we on our part exercising all due care to confine the fire

within

within the banks of the river, so that no damage could be inflicted upon the surrounding country.

I have written to the Honorable the Colonial Secretary this day, enclosing a copy of this letter, and requesting instructions as to the application of sums put down in Mr. Macleay's motion.

GEORGE NORMAN LOCKHART, ESQ.,  
Commissioner of Crown Lands,  
Murrumbidgee District.

I have, &c.,  
F. CADELL.

No. 2.

THE COLONIAL SECRETARY to F. CADELL, ESQ.

55-12,439

Colonial Secretary's Office,  
Sydney, 27 December, 1855.

SIR,

In reply to your letter of the 30th ultimo, I have the honor, by direction of His Excellency the Governor General, to inform you, that the sum of £1,000 for clearing the Murray River, and also the sum of £1,000 for clearing the Murrumbidgee River, have been voted by the Legislative Council, such sums to be expended by the River Murray Navigation Company, under the superintendence of the Crown Lands' Commissioner of the District, and that Colonel Barney has been desired to convey instructions to the Commissioner to take steps, in concert with the Company, for carrying out the intentions of the Legislative Council.

F. CADELL, ESQ.,  
Manager of the River Murray Navigation Company,  
Goolwa, South Australia.

I have, &c.,  
W. ELYARD.

No. 3.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.

55-12,439

Colonial Secretary's Office,  
Sydney, 27 December, 1855.

SIR,

The Legislative Council having voted the sum of £1,000 for clearing the Murray River, and also the sum of £1,000 for clearing the Murrumbidgee River, such sums to be expended by the River Murray Navigation Company, under the superintendence of the Crown Lands' Commissioner of the District, I am directed by His Excellency the Governor General to request, that you will give instructions to the Commissioner of the District to take steps, in concert with the Company, for carrying out the intention of the Council.

THE CHIEF COMMISSIONER  
OF CROWN LANDS.

I have, &c.,  
W. ELYARD.

No. 4.

F. CADELL, ESQ. to THE COLONIAL SECRETARY.

Albury, 19 January, 1856.

SIR,

I have the honor to acknowledge receipt of your communication of 27th ultimo, relative to the sum of £1,000 voted for clearing the Murray, and also a sum of £1,000 for clearing the Murrumbidgee.

Anticipating the tenor of your letter, I have already put myself in communication with Mr. Lockhart, the Commissioner of the District, and as the flat-bottomed boats, &c., and the gear are now ready, I purpose to commence operations on the 21st instant.

THE HONORABLE  
THE COLONIAL SECRETARY,  
New South Wales.

I have, &c.,  
F. CADELL.

No. 5.

MR. COMMISSIONER LOCKHART to THE CHIEF COMMISSIONER OF CROWN LANDS.

*Murrumbidgee District,  
Crown Lands' Office,  
6 February, 1856.*

SIR,

I do myself the honor to inform you, that Captain Cadell, acting for the "Murray River Navigation Company," has commenced to clear the course of the River Murray from obstructions to its navigation, and has furnished me with a sheet of moneys expended. The Company also purposes immediately to commence operations on the River Murrumbidgee.

2. In your letter of the 3rd January, 1856, (No. 56-15), I am instructed to take steps, in concert with the Company, to carry out the intention of the Legislative Council, which has voted £2,000 for the purpose of clearing the Rivers Murray and Murrumbidgee, to be expended by the River Murray Navigation Company, under the superintendence of the Crown Lands' Commissioner of the District.

3. I do myself the honor to state that the proposed superintendence by me, must of necessity, be only of the most general nature, as the duties already cast upon me are greater than I can, by any possibility, satisfactorily fulfil.

4. It may be assumed, as in the usual nature of things, that the Company will expend the money in the most economical and judicious manner possible, as their own success very much depends upon their so doing, so that any necessity for a minute superintendence is obviated, the more so, as the money is so totally inadequate to the work to be performed, and the chief burthen will lie upon the resources of the Company itself.

5. At the same time I consider it my duty to point out to you, that the operations have (on the River Murray) been commenced at Albury, the highest lying point to which the most sanguine trust that the Navigation of the River Murray can be extended. I think that the public money would be most advantageously expended in working upwards from the lowest lying obstruction, so that if at any time a cessation of the operations had taken place, a positive result would have been obtained, whereas by the mode of operation now adopted, the money expended on the upper part of the river, near Albury, is useless, until the clearing is carried down to the lowest obstructions, and if a cessation of operations should take place, no positive result will have been arrived at. The consequence (probably calculated on by the Company) will inevitably be, that in order to prevent the money now expended from being fruitless, the work done must be connected with the lower available waters by the expenditure of more public money on the river.

6. This continued expenditure may probably be willingly submitted to by the Parliament about to assemble, in so far as regards the Murray River, which has been in a certain degree shown to be navigable, which flows through a rich district, and on which a trade may arise from one part of that district to another.

7. In so far as regards the River Murrumbidgee, however, the case is altogether different; I gather from Captain Cadell's letters to me, that he purposes also to commence the expenditure by clearing from Wagga Wagga *downwards* to the confluence of the River Murray.

8. The main obstacles to the navigation of the River Murrumbidgee are at its mouth, and for thirty miles upwards, and the chief trade to be driven, and beneficial results to be obtained, are from the Lower Murrumbidgee, where the greatest number of sheep are depastured.

9. I would therefore respectfully beg, that it should be made an instruction to the Navigation Company that the £1,000 voted for the clearing of the Murrumbidgee will only be available for work done by clearing from the confluence with the Murray River *upwards*, and thus a positive beneficial result will be obtained should funds not be further supplied. If this condition be not made, the money now about to be expended will be lost, or two great public works will have to be carried on at the expense of the public purse under inefficient superintendence, and, possibly, at some inconvenience to the Treasury.

## RIVERS MURRAY AND MURRUMBIDGEE.

5

10. Captain Cadell, the Agent of the Company, has applied to me to know in *what* manner he is to be reimbursed by the Treasury, and states, that it will be of importance to have payments made on account from time to time. I find that it will be a matter of necessity for me to visit Albury on the whole matter, in order to confer with the Agent of the Company, and in order to see the nature of the work done. This visit I shall probably make after the main body of licenses for February are issued at the Gold Fields, and the Assessment Returns sent in, so as to be able to return to head-quarters early in March.

11. I would propose that £1,000 should be paid into the London Chartered Bank, to my credit, for the special service indicated, and that on my return I should commence making payments to the Company. There only remain a few months during which the money can be expended, before the winter floods stop operations, and I would therefore beg, that the means I have indicated may be adopted, in order to ensure payment to Captain Cadell on the breaking-up of the clearing party in June next.

I have, &c.,  
CHARLES G. N. LOCKHART,  
Commissioner of Crown Lands.

THE CHIEF COMMISSIONER  
OF CROWN LANDS,  
Sydney.

## No. 6.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.  
56-1792. Colonial Secretary's Office,  
Sydney, 29 February, 1856.

SIR,

With reference to Mr. Commissioner Lockhart's letter, transmitted by you to this office on the 15th instant, respecting the clearing by Captain Cadell, acting for the Murray River Navigation Company, of the Rivers Murray and Murrumbidgee, I have the honor to inform you, that Mr. Lockhart's suggestions seem to the Governor General to be right and proper, and to request, therefore, that you will direct him to call upon the Company to carry on their work from below, upwards in the Murrumbidgee.

2. His Excellency also directs me to inform you, with reference to the last paragraph of the letter, that the Auditor General has been instructed to prepare a warrant for the issue to Mr. Lockhart's credit in the London Chartered Bank of the sum of one thousand pounds, for payment to the Company, from time to time, on account; and it will be necessary for proper accounts and vouchers, for the expenditure of the money, to be hereafter furnished to the Audit Office.

I have, &c.,  
W. ELYARD.

THE CHIEF COMMISSIONER  
OF CROWN LANDS.

## No. 7.

THE COLONIAL SECRETARY to THE AUDITOR GENERAL.  
56-1792. Colonial Secretary's Office,  
Sydney, 28 February, 1856.

SIR,

In transmitting to you the enclosed letter from Mr. Commissioner Lockhart, respecting the clearing of the Rivers Murray and Murrumbidgee by Captain Cadell, acting for the Murray River Navigation Company, I am directed by His Excellency the Governor General to draw your attention to the last paragraph, and to request that out of the £2,000

voted for clearing the rivers in question, you will, if you see no objection, prepare a warrant for placing one thousand pounds to Mr. Lockhart's credit in the London Chartered Bank, to be advanced by him to the Company, from time to time, on account.

2. The Chief Commissioner of Crown Lands has been informed accordingly, and that it will be necessary for Mr. Lockhart to furnish proper accounts and vouchers for the expenditure of the money hereafter to the Audit Office.

I have, &c.,

W. ELYARD.

THE ACTING AUDITOR GENERAL.

No. 8.

THE CHIEF COMMISSIONER OF CROWN LANDS to THE COLONIAL SECRETARY.

*Crown Lands' Office,*

*Sydney, 3 March, 1856.*

SIR,

I do myself the honor to forward herewith, for the information of His Excellency the Governor General, the enclosed report of Mr. Commissioner Lockhart, on the mode of operation and progress made in clearing the Rivers Murray and Murrumbidgee from impediments to their navigation.

2. I have communicated to the Commissioner the contents of your letter of the 29th ultimo.

I have, &c.,

GEORGE BARNEY,

Chief Commissioner of Crown Lands.

THE HONORABLE

THE COLONIAL SECRETARY,  
&c., &c., &c.

[Enclosure in No. 8.]

*Murrumbidgee River,*

*Crown Lands' Office,*

*21 February, 1856.*

SIR,

Since I had the honor of addressing you in my letter of the 6th instant, No. 56-81, on the subject of the clearing of the Rivers Murray and Murrumbidgee, by the River Murray Steam Navigation Company, from impediments to their navigation, I have had a personal interview with Mr. Francis Cadell, the Managing Director of the Company, who is superintending their operations, and I now do myself the honor to report, that—

2. The plan adopted in clearing the rivers is, to cut down everything flush with the surface of the water, at its present level, which, unfortunately, is a high one for summer; any rise above this level, equal to the draft of the vessels employed, will, therefore, form a clear navigable stream for these vessels.

3. The timber lopped off is allowed to sink, and it is presumed that it will never again incommode the navigation.

4. These operations on the River Murray have been carried on as far as Howlong, which, reckoning from Albury downwards, is a distance of about 70 miles by the river.

5. The expenditure hitherto has amounted to about £340, and has been chiefly of a preliminary nature, in building boats, purchase of tools, &c., &c., which have become the property of the Government, and on the close of the operations, being sold, will return something to the Treasury.

6. This expenditure has been defrayed by Mr. Cadell, out of private funds, and he is very anxious to obtain, as soon as possible, some portion of the money voted.

7. I have also arranged with Mr. Cadell, that when, from any freshes in the rivers, the clearing party is prevented from working, that timber for fuel shall be cut and stacked, and paid for by the Company, at the usual rate of fuel; this, I trust, will meet with your approval, so that again some little saving will be effected.

8. I have further to report that, acting under my advice, Mr. Cadell has not commenced operations on the River Murrumbidgee at Wagga Wagga, as he at first intended, but has commenced at the junction of the Lachlan. It is calculated that the money voted will suffice to clear the river from thence to the junction with the River Murray. The preliminary outlay has been £91.

I have, &c.,

CHARLES G. N. LOCKHART,

Commissioner of Crown Lands.

THE CHIEF COMMISSIONER  
OF CROWN LANDS,  
Sydney.

No. 9.

THE AUDITOR GENERAL to THE COLONIAL SECRETARY.

*Audit Office, Sydney,  
17 March, 1856.*

SIR,  
I have the honor to acknowledge the receipt of your letter of the 28th ultimo, No. 261, authorizing me, if aware of no objection, to prepare a Warrant for placing £1,000 to Mr. Lockhart's credit in the London Chartered Bank, out of the £2,000 voted for clearing the Rivers Murray and Murrumbidgee.

In reply I beg to state, that the great difficulty now experienced in raising money by the sale of Government Debentures would seem to indicate the propriety of postponing the payment of this money, which, under the Public Works Loans' Act of last Session, is to be raised by Loan.

I have, &c.,  
JOHN STIRLING.

THE HONORABLE  
THE COLONIAL SECRETARY.  
&c., &c., &c.

No. 10.

THE COLONIAL SECRETARY to THE AUDITOR GENERAL.

56-2623. *Colonial Secretary's Office,  
Sydney, 29 March, 1856.*

SIR,  
In acknowledging the receipt of your letter of the 17th instant, No. 69, respecting the sum of £1,000, authorized to be issued to Mr. Lockhart's credit in the London Chartered Bank, towards clearing the Rivers Murray and Murrumbidgee, I have the honor to inform you, that as arrangements have been made in the expectation of receiving the amount, His Excellency the Governor General approves of payment of it being made as soon as the money is available.

I have, &c.,  
W. ELYARD.

THE HONORABLE  
THE AUDITOR GENERAL.

No. 11.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.

56-2623. *Colonial Secretary's Office,  
Sydney, 31 March, 1856.*

SIR,  
With reference to your letter of the 3rd instant, No. 85, enclosing a further report from Mr. Commissioner Lockhart, on the subject of the clearing of the Rivers Murray and Murrumbidgee, I am directed by His Excellency the Governor General to inform you, that the sum of £1,000, already authorized to be issued, will be advanced as soon as the money is available. The remaining sum of £1,000, out of the vote for clearing these rivers, cannot, however, be issued for the present, to which effect you will have the goodness to instruct Mr. Lockhart to apprise Captain Cadell.

I have, &c.,  
E. DEAS THOMSON.

THE CHIEF COMMISSIONER  
OF CROWN LANDS.

## No. 12.

GEORGE MACLEAY, Esq., to THE COLONIAL SECRETARY.

*Sydney, 16 April, 1856.*

SIR,

I do myself the honor to draw your attention to the fact, that up to the present time, no portion of the sums voted during the last Session of the late Legislative Council towards the clearing the channels of the Murray and Murrumbidgee Rivers has been paid into Mr. Commissioner Lockhart's hands.

I beg to state, that I have lately received a communication from Captain Cadell, from which I gather that he commenced operations on the Murray nearly four months ago, and on the Murrumbidgee on the 17th of last month;—that he has been doing this, of course, entirely at his own expense; and that his private funds being all but exhausted, he is greatly in dread of being compelled to discharge his laborers, and thus lose the season for beneficially carrying out the work.

I trust that, as the individual who introduced the motion for the grant of these sums in the late Council, as one of the present representatives of the District most interested, and a personal friend of Captain Cadell, who has shewn such untiring energy and devotion in his endeavours to promote the navigation of these rivers, I may be pardoned for thus urging upon your attention the necessity of sending up, without further delay, the funds requisite for carrying out this most important object.

I have, &amp;c.,

GEO. MACLEAY.

THE HONORABLE  
THE COLONIAL SECRETARY,  
&c., &c., &c.

## No. 13.

THE COLONIAL SECRETARY to GEORGE MACLEAY, Esq.

56-3641.

*Colonial Secretary's Office,  
Sydney, 25 April, 1856.*

SIR,

In reply to your letter of the 16th instant, I am directed by His Excellency the Governor General to inform you, that instructions will be given without delay, for the issue of the money (£2,000) appropriated by the late Legislative Council towards the clearing of the Murray and Murrumbidgee Rivers.

I have, &amp;c.,

W. ELYARD.

GEORGE MACLEAY, Esq.

## No. 14.

THE AUDITOR GENERAL to THE COLONIAL SECRETARY.

*Audit Office, Sydney,  
25 April, 1856.*

SIR,

Referring to your letter of the 29th ultimo, respecting the issue of £1,000, on account of the Rivers Murray and Murrumbidgee, I do myself the honor to transmit herewith a Warrant which I have prepared, on the application of Colonel Barney and Mr. Commissioner Lockhart for the following sums, being the amount voted by the Legislative Council, viz. :—

For clearing the channel of the River Murray ... ..	£1,000
For clearing the channel of the River Murrumbidgee ... ..	£1,000

2. The whole amount will be advanced to Mr. Lockhart, in whose favor the Warrant is made out, and it may be proper to explain, that as His Excellency the Governor General



and the Executive Council have now authorized the raising of the money required for these services, and an arrangement has been made with the Commercial Bank for the purchase of the Debentures by which it is to be raised, there seems to be no objection to immediate payment being made to the extent voted, out of the balance in the Treasury, at the credit of the Consolidated Revenue.

I have, &c.,  
FRANCIS L. S. MEREWETHER.

THE HONORABLE  
THE COLONIAL SECRETARY,  
&c., &c., &c.

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No. 15.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.

56-4046.

*Colonial Secretary's Office,  
Sydney, 27 May, 1856.*

SIR,

With reference to my letter of the 31st March last, respecting the issue of the money appropriated by the Legislature towards clearing the Murray and Murrumbidgee, I am directed by His Excellency the Governor General to inform you, that a Warrant has since been passed for the advance of the sums voted, being £1,000 for each river, to Mr. Lockhart, to be expended in the manner already pointed out.

I have, &c.,  
W. ELYARD.

THE CHIEF COMMISSIONER  
OF CROWN LANDS.

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No. 16.

A Return of all the Customs' Dues on goods conveyed up the Murray, that have been received in the Treasury of New South Wales, from the Government of South Australia.

Period.		Amount Collected.	Less 6 3/4 cent. for Collection.	Amount paid into the Treasury.
1 July, 1854	31 October, 1855	1,491 17 10	89 10 3	1,402 7 7

GEO. R. NICHOLS.

*Audit Office, Sydney,  
25 August, 1856.*



1856.

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NEW SOUTH WALES.

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## SHIPWRECKS AT NEWCASTLE.

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*Ordered by the Legislative Assembly to be Printed, 19 November, 1856.*

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To the Honorable the Legislative Assembly, in Parliament assembled.

The Petition of the undersigned Inhabitants of the City of Newcastle—

HUMBLY SHEWETH,—

That the numerous wrecks which have occurred in and near the Port of Newcastle, involving considerable loss of life and great destruction of property, more especially the recent loss of seven vessels in and near the Port, are subjects which demand the most rigid inquiry, both for the cause of humanity and the character of the Port.

Your Petitioners therefore pray, that your Honorable House will be pleased to institute a Committee of inquiry into the general management of the affairs of the Port of Newcastle, and in particular into the circumstances attending the recent shipwrecks, by the examination of competent persons, who may afford your Honorable Committee evidence relative to those disasters, out of which means for their future prevention may be arrived at, and an improved system of Harbour Regulations adopted.

And your Petitioners will ever pray.

*[Here follow 102 Signatures.]*

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1856.

NEW SOUTH WALES.

## LICENSED WATERMEN.

(PRAYING REDRESS.)

*Ordered by the Legislative Assembly to be Printed, 9 December, 1856.*

To the Honorable the Members of the Legislative Assembly.

The humble Petition of the undersigned Licensed Watermen of the City of Sydney,  
Balmain, Pyrmont, &c., &c.,

RESPECTFULLY SHEWETH :—

That in the *Government Gazette* of May sixth, now last passed, it is set forth that in the Court of General and Quarter Sessions of the Peace, holden at Sydney, in and for the Colony of New South Wales, on Monday, the 28th day of April, and continued by adjournment to Thursday, the first day of May, in the year of our Lord one thousand eight hundred and fifty-six, before Alfred Cheeke, Esquire, Chairman, Samuel North, Hutchinson Hothersall Browne, and Michael Egan Murnin, Esquires, Tables were made according to the Act of the Governor and Council (4 Wm., No. 7, section 60), to regulate and fix the rates and fares to be charged by any licensed boatman for the conveyance of passengers, and to fix and regulate the distances at which such licensed boatmen should be liable to go.

That, contrary to the expectations of your Petitioners, these tables do not show an increased rate of fares on those published in the Port Regulations for the Harbour of Port Jackson, before the discovery of Gold in the Australian Colonies.

That the enormous increase in house rent and the price of the common necessaries of life, consequent on the gold discovery, renders it impossible for your Petitioners to obtain a livelihood under the existing scale of charges.

That the discovery of Gold in this Colony was followed by a largely augmented Steam Communication, both by ferry boats plying across the harbour at various points, and by boats running between this Port and Port Phillip, thereby depriving the coasting vessels from bringing passengers, which vessels, when anchored in the stream, afforded remunerative employment to your Petitioners. The steamers now come direct to the wharfs, and consequently offer no employment to your Petitioners.

That your Petitioners believe themselves to be the only class of men in this City who have not reaped the advantage which others have by being the recipients of increased salaries, and that while labourers, mechanics, clerks, and other bodies, have reaped such additional pecuniary benefits as the state of the times required, the Licensed Watermen of this City and the Hamlets are by law still enabled to charge no more for their services than before the Gold discovery, while at the same time boats, and the gear connected therewith, cannot now be procured at more than double the price charged when the present rates of fares were first published.

That your Petitioners, therefore, humbly pray your Honorable House will be pleased to amend the present tables of fares for boatmen, and to increase the charges to such an extent as will be more suitable to the present expensive state of the times in this Colony.

And your Petitioners further pray, that your Honorable House will insert a clause in the Act, giving Watermen power to sue for unpaid fares at the Water Police Office,—the Act, as it now stands, giving your Petitioners no opportunity of obtaining redress where passengers refuse to pay a legal fare.

And your Petitioners further pray, that the portion of the Act compelling Watermen to take a fare between sunrise and eight post meridian may be repealed, and from sunrise to sunset be substituted in its stead.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 43 Signatures.]

THE HISTORY OF THE

The first part of the history of the...  
The second part of the history of the...  
The third part of the history of the...

The fourth part of the history of the...  
The fifth part of the history of the...

THE END

Printed by...

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1857.

NEW SOUTH WALES.

**STEAM DREDGE.**

(PROPOSAL TO RENT BY MESSRS. ROUNTREE AND CO.)

*Ordered by the Legislative Assembly to be Printed, 13 March, 1857.**Mort's Dry Dock,  
9 January, 1857.*

SIR,

We beg most respectfully to propose that we may be allowed to Rent the Steam Dredge from the Government, on the following conditions:—

Rountree and Co. agree to pay £500 (five hundred pounds) per annum interest on capital or rent, and to remove 10,000 tons of silt per annum for the Government, from any part of the Harbour above Pinchgut Island, free of charge, the Government paying the usual charge to Rountree and Co. for any quantity they may wish removed over and above 10,000 tons; and that the Government lengthen the present ladder 20 feet, which ladder will then make 22 feet water. The Government to build two punts, each to carry 100 tons of silt, with loose bottoms, and alter the two punts already belonging to the dredge.

Rountree and Co. wish for a lease for one year, with the option of three years. Rountree and Co. will build the punts, and make the other alterations for the sum of two thousand pounds.

Rountree and Co.'s object in going to this great outlay is for the Mail Service, and trust that the Government will give this application their early consideration, as much larger boats, belonging to the European and Australian Mail Company, than those already in port, are expected in a few months.

We have, &c.,  
ROUNTREE & CO.

P.S.—In case this is accepted, Mr. T. S. Mort will become surety.

THE HONORABLE  
THE COLONIAL TREASURER.





1856.

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NEW SOUTH WALES.

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## LIGHT HOUSES.

(ESTABLISHMENT OF IN THE AUSTRALIAN COLONIES.)

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*Ordered by the Legislative Assembly to be Printed, 25 November, 1856.*

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### REPORT

*Of the Commissioners appointed by the Governments of New South Wales, Victoria, South Australia, and Tasmania to confer upon the subject of Light Houses in the several Australian Colonies.*

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#### MEMBERS OF THE COMMISSION:—

WILLIAM THOMAS NAPIER CHAMP, Esq., THE HON. THE CHIEF SECRETARY OF TASMANIA, CHAIRMAN.

H. H. BROWNE, Esq., IMMIGRATION AGENT OF NEW SOUTH WALES.

J. H. KAY, Esq., COMMANDER R. N., AND PRIVATE SECRETARY TO HIS EXCELLENCY THE GOVERNOR OF VICTORIA.

BLOOMFIELD DOUGLAS, Esq., NAVAL OFFICER AND HARBOUR MASTER, AND MASTER OF THE TRINITY HOUSE OF SOUTH AUSTRALIA.

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## LIGHT HOUSES.

The Commissioners appointed by the respective Governments of New South Wales, Victoria, South Australia, and Tasmania, to consider the adoption of some general and uniform scheme for the erection and maintenance of the Light Houses on the Australian Coasts, having assembled in Melbourne, proceeded in the first instance to discuss the proposal of His Excellency the Governor General, as to the expediency of appointing a General Board, composed of Delegates from the different Australian Colonies, to which Board it was considered powers might be given similar to those of the Trinity Board in London, or the Commissioners of the Northern Lights in Scotland.

In the official letters from the Colonial Secretary of New South Wales, addressed to the other Colonies interested in this question, the Governor General considered it desirable that the Commissioners from each Colony should be prepared to discuss:—

1. The constitution and powers of the Board.
2. The mode in which the funds which must be placed at its disposal are to be raised.
3. The provisions of the enactments which must be submitted to the Legislatures of the different Colonies, in order to give the Board a legal existence, and such powers as may be necessary for the performance of its duties.
4. The arrangements which must be made in order to enable the representatives of each Colony in the Board, to control and superintend the Lights in that Colony.

In considering the first proposal, viz., what should be the nature of the constitution and powers of the Board, the Commissioners are of opinion that to give such an existence to a Board of this character as will ensure an effective and unanimous management likely to produce the results anticipated, it must be necessary, not only to arrive at a satisfactory conclusion as to the nature of the regulations that will be requisite for its guidance, but also that an unanimity of action should be agreed upon as to the collection and disposal of the funds which it would be necessary to obtain from each Colony interested in its formation.

To arrive at such a conclusion in the present conference appears to be impracticable, for the following reasons: New South Wales at present levies no light dues, her ports being entirely free from the imposition of any dues excepting pilotage; Victoria is similarly situated in respect to light dues, but levies a tonnage duty of one shilling a ton.

South Australia and Tasmania both maintain their lights by special dues levied for that purpose.

Both these latter Colonies object to any interference in the disposal of the sums so raised, Tasmania on the ground that her Legislature would be naturally jealous in allowing interference with the money appropriated by them for a specific purpose; and South Australia, in consequence of the existence of a Trinity Board which retains the power of levying rates only on account of lights erected on their own coasts; whilst at the same time Victoria is unwilling, on account of the existence of large tonnage dues, to increase the burthens on shipping visiting her shores; and New South Wales, although willing to co-operate in a general scheme for such an important purpose, is naturally reluctant to make a retrograde step in the imposition of shipping dues, now altogether abolished.

The Commissioners have considered it hopeless, under the circumstances, to establish a Board that will combine the materials requisite for a vigorous management, and have therefore decided, that in their opinion, the same results may be brought about by ascertaining in the first instance, where additional Light Houses ought to be erected, and then by apportioning the expense of their erection and maintenance between the Colonies interested, in such proportions as the amount of tonnage passing these lights will indicate.

Secondly. The Commissioners are of opinion that the question of providing funds requisite for the support of their own lights, or of the proportions of such other lights as may be allotted for their maintenance, may be fairly left for the consideration of the respective Governments, to be raised in such a manner as may be most in accordance with the views of their several Legislatures.

It does not appear necessary to them to entertain the third and fourth proposals, in consequence of the decision at which they have arrived on the subject of a Central Board.

2. In this view of the case the Commissioners proceeded to avail themselves of the best information of a practical character which could be obtained, by the examination of thirty-nine witnesses, who consisted principally of master mariners, employed both in the coasting and over-sea trade, and who might be considered competent to give such information as would be useful in enabling them to arrive at satisfactory conclusions as to where additional lights might be required.

3. With reference to the Light Houses already in existence, the evidence adduced will justify the Commissioners in arriving at the conclusion that they are suitably placed, and sufficiently powerful for the purposes for which they were erected. The evidence, however, has produced an impression on their minds that the Light on Gabo Island, being only an erection of a temporary character, and therefore liable to destruction by fire, might with advantage to the navigation of the coast, be constructed more substantially, and be at the same time removed to the south-eastern extremity of the Island, at such an increased altitude as would extend its radius of vision to the distance of twenty miles. Some of the witnesses state that this light is not always of such a brilliancy as might be expected from a lantern of its capacity and power, but this deficiency may perhaps be attributable either to its low altitude,

altitude, or to some defect in its management. The necessity of maintaining a Light of the greatest efficiency on this important turning point of the Australian Coast, is obvious to every one.

4. From the tenor of the evidence attached to this Report, the Commissioners consider that the erection of the following additional Light Houses will greatly facilitate the navigation of these coasts, viz. :—

1. Cape Borda.
2. Cape Northumberland, in the province of South Australia.
3. Cape Schank.
4. Wilson's Promontory, in the Colony of Victoria.
5. King's Island, in the Colony of Tasmania.
6. Cape St. George, in the Colony of New South Wales.

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1. *Cape Borda; and, 2. Cape Northumberland.*

5. The Commissioners have been informed, by the evidence of Mr. Douglas, the officer representing South Australia, that instructions have been already given by that Government for the speedy erection of Light Houses on Capes Borda and Northumberland; and as these two Lights may be considered more immediately beneficial to that Colony, it is thought that the expense of their erection and maintenance may be fairly borne by the Government of South Australia.

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3. *Cape Schank.*

6. The importance of erecting a light on this portion of the coast of Victoria, has been strongly urged upon the consideration of the Commissioners by nearly every witness that they have examined. Its advantages will not only be felt by the direct trade to the ports of Melbourne and Geelong, but it will also be a benefit to vessels working through the Straits in either direction against contrary winds; and as a guide to vessels seeking shelter in Western Port in adverse weather, its utility will be fully appreciated. The locality was viewed by the Commissioners, on their return from an examination of Wilson's Promontory, and there do not appear to be any engineering difficulties which would prevent its erection at a reasonable cost, or its maintenance by overland communication. The Commissioners recommend that in contradistinction to the Light on Cape Otway, the Light now recommended to be placed on Cape Schank be a first-class intermittent light, with intervals of thirty seconds, to be placed on a tower fifty feet high, and similar in its character to that erected by the South Australian Government on the Troubridge Shoals, at the entrance to the Gulf of St. Vincent; and as this light is urgently required, for the additional safety of the large amount of over-sea and coasting trade entering Port Phillip Heads, the expense of its erection and maintenance should be borne by the Government of Victoria.

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4. *Wilson's Promontory.*

7. The position of this headland in the most intricate part of the navigation of Bass's Straits, has impressed the minds of the Commissioners with the absolute necessity of erecting a Light House in its immediate vicinity. As the great high road to the over-sea and coasting trade from Victoria to the Colonies of New South Wales, Tasmania, and New Zealand, and from South Australia to New South Wales, Tasmania (by the eastern route), and New Zealand, its position demanded the most attentive consideration. Surrounded as it is by numerous dangers lying in the direct track, some hidden and some of a less dangerous character, the expediency of erecting this Light has been a subject of lengthy investigation.

The principal difficulty which the Commissioners have had to contend with, has been in deciding upon a position for this Light, in which the greatest amount of advantage could be obtained, consistent with what could be practically accomplished. Many of the witnesses most conversant with that locality, were of opinion that the ten foot rock, situated four miles south of the south-east extreme of the Promontory would be the best position. Some recommended the island of Rodondo, whilst others advocated the necessity of placing one light on the Cleft Island, and another on the southernmost of the Seal Islands. The Promontory itself was also suggested, but most of the witnesses were unable to establish, to the satisfaction of the Commissioners, that it would afford a sufficient guide to vessels coming from the eastward to enable them to clear the Seal Islands.

With this conflicting evidence before them, and feeling the importance of satisfactorily deciding upon a matter of so much moment to the Colonies interested, the Commissioners considered it advisable to visit the locality themselves, and ascertain by personal examination the most favorable position.

They accordingly put themselves in communication with the Government of Victoria, who at once, in the most handsome manner, placed the "Victoria," steam-sloop, at their disposal. The opportunity thus afforded enabled them at once to arrive at the conclusion, that the Cleft Island, recommended by some of the witnesses as a site for a Light House, was not only inaccessible, but perfectly impracticable for communication by boats; that the Island of Rodondo was similarly objectionable, not only on account of its inaccessibility, but also in consequence of its extreme height, which would be likely to render a light on its summit frequently obscured; and that the "Ten-foot Rock," (the site most advantageous of all the positions recommended) appeared to present impracticable difficulties, which no engineering skill could surmount, except at an enormous expenditure of money and risk of human

human life. During the visit of the "Victoria," the weather being at the time comparatively fine, the sea was making a clean breach over this rock with sufficient violence to have washed away the commencement of any structure, together with the workmen engaged upon it.

The south-eastern pitch of the Promontory was next examined, and found to afford advantages of position superior to what had been contemplated. The extreme point consists of a bold headland of granite formation, level on its surface, and standing at an elevation of about three hundred feet; landing was effected in its immediate vicinity with facility, and no engineering difficulties appeared to present themselves which could prevent the construction of a Light House at a moderate cost. Observations were taken by the Marine Surveyor from a spot selected by the Commissioners, which gave a clear sea-horizon of 19 points of the compass, viz., from Cape Wellington, bearing north 34 degrees east, to the southern extreme of Cleft Island, bearing south 72 degrees west. To vessels approaching from the north-east this Light will be visible, under ordinary circumstances, at a distance of twenty-five miles, or nine miles to the north-east of the Seal Islands, and when shut in by Cape Wellington, will warn the navigator of a too near approach to the shoals in the vicinity of Corner Inlet. In approaching the Promontory from the westward, the Light open of Cleft Island will enable vessels to shape a course with confidence clear of the dangers in this locality, whilst to vessels from Port Phillip bound to the eastward, this light will be invaluable. Having taken a departure from the Light House on Cape Schank, and continued on the usual course for fifty-two miles, the Light on Wilson's Promontory will shew clear of the south end of Cleft Island, at a distance of fourteen miles. The position of the hidden dangers in the vicinity of the Promontory being within the radius of this Light, will also be clearly pointed out.

In the immediate vicinity of this headland, ample shelter can be obtained in Waterloo Bay, which was found to be not only available during westerly gales, but also capable of affording shelter to *small vessels* in southerly gales. Wood and water are also to be procured in abundance, and in the establishment of this Light, the Commissioners would recommend that it be placed on a tower fifty feet high, and be a fixed catoptric light of the first class.

In consideration of the advantages to be derived from this Light House by the trade of the respective Colonies of New South Wales, Victoria, and South Australia, the Commissioners would suggest that the expense of its construction and maintenance should be borne by those Colonies in equitable proportions.

From authentic information obtained by the Commissioners, they have ascertained that the large proportion of the tonnage to which this particular Light will be beneficial, (beyond a very small fraction which might be fairly chargeable to South Australia,) will be absorbed by the Colonies of New South Wales and Victoria, and by them the Commissioners therefore recommend the expense should be defrayed for its erection and maintenance in equal proportions. In releasing the Colony of South Australia from her proper contribution towards the maintenance and erection of this Light, the Commissioners conceive that as considerable advantage will be obtained by the trade of New South Wales and Victoria in proceeding to the westward from the Light now in course of erection on Cape Northumberland, this may be taken as a reasonable set-off in favor of that Colony for the advantage she will derive from the use of the Light on Wilson's Promontory.

#### 5. King's Island.

8. The establishment of a Light on this island has been frequently urged on the notice of the Governments of Victoria and New South Wales by the Chambers of Commerce in those Colonies, as well as in the neighbouring Colony of Tasmania, in consequence of the many lamentable shipwrecks which have, from time to time, taken place on its iron-bound shores. In the month of August, 1855, the Government of Victoria despatched a Board of Officers to investigate and report as to the most eligible site for a Light House on that island, and the report made by them is hereunto appended, recommending a site for its erection on Cape Wickham, the northern extremity of the island.

Appendix B.

On reference to the evidence given by the witnesses examined by the Commissioners, it will be seen that much difference of opinion exists in the minds of those persons who have frequently visited its neighbourhood, not only as to the position in which the Light might be most suitably placed, but also as to whether such a Light would be at all beneficial in its results, or be more likely to lead the mariner among the dangers situated in the immediate vicinity.

The Commissioners have very carefully considered this most important subject, and although they are clearly of opinion that it is contrary to all general principle to light inside a danger, still they conceive that in this instance the principle may be safely deviated from, and that a Light should be erected on this island to warn navigators of the dangers to be apprehended from a too close approach to the reefs surrounding its northern coast.

It has been urged by some of the witnesses, that the New Year's Islands (lying at a distance of eight miles from the northern extremity of King's Island,) afford advantages for the site of a Light House beyond the position recommended in the report of the Board.

The Commissioners have attached considerable weight to these opinions, more particularly as the majority of the wrecks have occurred to the southward of the New Year's Islands; but having ascertained beyond a doubt that the point recommended by the Board of Officers is not more liable to be capped in bad weather than ordinary headlands, but that the elevation at which this Light is proposed to be placed will afford a radius of vision to the southward of the islands themselves, they coincide in the recommendation of that Board.

In advising the erection of a Light House on this island, the Commissioners wish to guard themselves from affording the public any reasonable supposition that this Light can

be

be at all considered in the position of a great highway Light for the navigation of the Straits. The south coast of New Holland, at the western entrance to Bass's Straits, being free from dangers, affords, in their opinion, the safest shore for the prudent mariner to approach; and they conceive that the Light on King's Island is only to be regarded as a beacon for warning navigators of danger, rather than as a leading Light to a great thoroughfare.

In arriving at this decision they have not been unmindful, that if the Light was placed on the New Year's Islands, it would not be of any service to vessels working through the Straits from the eastward, neither could it become a guide for vessels seeking shelter under the lee of the island during westerly gales; but whilst thus adopting the views of the Board of Officers as to the position of this Light House, the Commissioners would advise that before any expense is incurred in its erection, it should be carefully ascertained whether any real necessity exists for building the tower to the great height of 120 feet (as recommended in that Report), or whether the requisite advantages might not be obtained in constructing a tower of lesser altitude, by which the expense would be considerably diminished.

The Light on Cape Otway being revolving, it will be necessary that the one to be erected on King's Island should be a fixed catoptric light of the highest class of intensity. This Light will be of the greatest service to the Colony of Victoria, in consequence of the great amount of her over-sea trade arriving from the westward; New South Wales will receive the next greatest benefit for similar reasons; whilst Tasmania will secure considerable advantage to her trade to and from Victoria and South Australia, as well as to her over-sea trade coming from the westward, and bound to the River Tamar. On these grounds the proportion of the expense of its erection and maintenance should, in the opinion of the Commissioners, be borne as follows:—

Victoria .....	One half.
New South Wales .....	One fourth.
Tasmania .....	One fourth.

Whenever public notice is given of the Light on King's Island being ready for exhibition, the Commissioners would strongly recommend that it be accompanied by a caution to masters of vessels that this Light is not intended as an encouragement for them to borrow on the Island, under any circumstances that can be avoided, but that it is only placed there as a beacon to enable them to clear a danger, if, by unforeseen circumstances, they find themselves in that locality.

#### 6. *Cape St. George.*

9. This headland, situated on the Coast of New South Wales, has from its position, frequently endangered the safety of vessels bound to Sydney from the southward. A deep indentation lying to the westward of this Cape has been the scene of several wrecks, principally caused by the indraught usually setting in on the coast, assisted by the ocean swell, and also by the want of some distinguishing mark to warn the mariner of his proximity to danger. From the evidence of the witnesses conversant with this coast (more particularly the masters of steam ships and coasters), there is an unanimous feeling that a Light House should be erected on Cape St. George, and in this view the Commissioners agree, believing that it will be of considerable service to the coasting trade of New South Wales. The headland is of a sufficient elevation to give a large radius of vision, and therefore, the tower of the Light House only requires to be of a sufficient height to work the revolving machinery, and the Light should be intermittent, of the second class, shewing its greatest intensity at intervals of 30 seconds.

This Light being beneficial to the coasting trade of New South Wales and Victoria in the same ratio as the Light about to be erected on Cape Schank, the Commissioners consider that as the latter Light is proposed to be erected and maintained by the Government of Victoria, the former may fairly be chargeable on the revenues of New South Wales.

10. With reference to the Lights already in existence and maintained by the Colonies of New South Wales, Victoria, and Tasmania, the Commissioners do not propose to disturb the existing arrangements, believing that the expenses are fairly distributed between those Colonies.

11. In continuing to allot the whole expense of the Goose and Swan Islands Lights to the Colony of Tasmania, the Commissioners have not been unmindful of the benefits which are derived by Victoria in her trade passing through Banks' Straits; but they consider that as the erection and maintenance of the Cape Schank Light is to be borne solely by the latter Colony, and the Light House on Wilson's Promontory is to be erected and maintained at the joint expense of New South Wales and Victoria, the advantages accruing to the Tasmanian trade therefrom will be an equivalent for the proportion which might otherwise be charged to Victoria for the use of the first-named Lights.

12. Some evidence has been given touching the necessity for the erection of a light on the eastern coast of Tasmania, in the vicinity of the Eddystone Point; the trade however which passes this locality being at present of a limited amount, the Commissioners do not see any immediate necessity for its erection.

13. The question of Harbour Lights has not been passed over without consideration, but the Commissioners think the establishment of any additional ones that may be requisite, ought more properly to be suggested by the officers representing their respective Governments.

14. In connexion with the important subject upon which the Commissioners have been instructed to report, they have not been unmindful of the necessity which exists for placing the management of the several Light Houses of the Colonies on the most economical basis

consistent with due and perfect efficiency; and from the evidence of Mr. Douglas, it appears that in the Colony of South Australia, this duty is performed by a Board appointed for that purpose. This Board undertakes not only the management of the Light Houses, but also the collection and disbursement of the funds arising from the dues levied on the shipping for that purpose, and while it appears to retain the confidence of the community, its operations (it is believed) have been beneficial to the trade and navigation of that Colony.

The Commissioners having decided that it will not at present be expedient (for the reasons before assigned) to establish a Central Board, nevertheless consider that should it be practicable to establish an unanimity of management of the Lights in the several Colonies interested, much advantage would be obtained, not only in facilitating the operations of future conferences of a similar character to the present one, but also in securing the best information on all points equally beneficial to each of the respective Colonies.

15. The Commissioners consider that it must be obvious to all persons interested in the navigation of Bass's Straits, that much of the safety to be accomplished by the additional Lights herein recommended must depend, not only on maintaining them in their most perfect efficiency, but also in securing at all times and under all circumstances *their distinctive features*, and they would therefore urge these observations on their respective Governments for their consideration.

16. In arriving at the conclusions already set forth as to the erection and maintenance of the six additional Lights, the Commissioners have been guided, not so much by the actual dangers which exist in their several localities, as by the advantages which will be obtained by the commercial and maritime portions of the communities in the several Australian Colonies; and they fearlessly assert, that if their recommendations are carried into effect, no reason exists for supposing that for many years to come, any additional expense will be required for lighting this great highway.

Appendix C.

17. The accompanying Table exhibits at a glance the several Light Houses already in existence, or recommended to be erected, and also the particular Colonies by which the expense of erection and maintenance is proposed to be wholly, or partially defrayed.

18. In recommending the adoption of catoptric lights, the Commissioners have not lost sight of the advantages, both in brilliancy of effect and in economy of management, which the dioptric principle of lighting possesses; but from the isolated positions in which the majority of the new Lights will be placed, and the difficulty which may exist in appointing trained and efficient Light-keepers to their management, they feel hardly justified in suggesting that system, in consequence of the delicate and very complicated character of the mechanical lamps and concentric burners therein used, more particularly as the catoptric lights at present generally in use in these Colonies are proved, by the evidence they have taken, to be sufficiently powerful and effective.

19. In conclusion, the Commissioners suggest to their respective Governments, that the agreement now entered into between the Colonies for the erection and maintenance of the Australian Light Houses, should be embodied in a Legislative enactment, and made binding upon the Governments of the several Colonies concerned, for a period of ten years.

W. CHAMP, Chairman, and Commissioner for Tasmania.

H. H. BROWNE, Commissioner for New South Wales.

J. H. KAY, Commander, R.N., Commissioner for Victoria.

B. DOUGLAS, Commissioner for South Australia.

Melbourne, 21 August, 1856.

## B.

### LIGHT HOUSE ON KING'S ISLAND.

*Laid upon THE COUNCIL TABLE by THE CHIEF SECRETARY, VICTORIA, by command of HIS EXCELLENCY THE GOVERNOR, and ordered by THE COUNCIL to be printed, 28TH NOVEMBER, 1855.*

*REPORT of the Board appointed by His Excellency SIR CHARLES HOTHAM, K. C. B., Governor of Victoria, to examine and report as to the necessity of a Light House being erected on King's Island, and the site best adapted for that purpose.*

#### MEMBERS OF THE BOARD:

Commander Ross, R.N., Chairman.

James Rusden, Esq., R.N.

W. H. Burgoyne, Esq., Clerk of Works, Colonial Engineer's Department.

#### I. AS TO THE NECESSITY OF A LIGHT HOUSE BEING ERECTED ON KING'S ISLAND.

A cursory glance at its dangerous and rocky shores, with the position it occupies at the entrance of Bass's Straits, its proximity to the coast of Victoria, the strong current sweeping towards its shores under the influence of a westerly gale (*found to be a prevailing wind*), and the disastrous shipwrecks that have occurred on its coast, but too strongly point to the vast boon the erection of a Light House would confer on the mercantile interests of Victoria and the neighbouring Colonies.

A beacon light on King's Island, if seen only at a moderate distance, would warn the mariner of his close proximity to a dangerous coast, where no harbour offers even a temporary shelter, and would avert a calamity which has too often occurred along the western shores of this Island by its timely warning.

#### II.

## II. THE BEST POSITION FOR THE PROPOSED LIGHT HOUSE.

A careful examination of the northern portion of the Island, and the adjoining New Year Islets, has induced us to decide that the north end of King's Island is unquestionably the best site for a Light House, and a reference to the accompanying plan will give a weight to this decision, conveying as it does more tangibly the results of our observations, (*the position is tinted yellow thereon*), and from the spot selected the sea horizon is visible around twenty-one points of the compass, even at an altitude of only six feet above the present surface of the ridge, consequently the light when erected, will embrace within its circle a still greater range of the compass, while at the same time it will be distinctly seen over the the New Year Islands; its usefulness will also be further extended by its proximity from the site selected to those dangerous shoals lying off the north end of the Island—the Navarine and the Harbingers.

## III. AS TO THE HEIGHT OF THE LIGHT ABOVE THE SEA, AND THE DISTANCE IT SHOULD BE SEEN.

The site selected for the proposed Light House has been found, by observation, to have an altitude of 171 feet above the sea level, and is on that part of the Mount Wickham Ridge running down to the North Cape, which has been cleared of the dense scrub by some recent bush fire, and lies about a quarter of a mile from the beach.

Mount Wickham, by these same observations, has been found to be only 312 feet above the level of the sea, instead of 595 feet, as shewn on the chart, and by comparison is doubtless the highest point of the Island.

The lantern should be elevated at least 300 feet above high water mark; it should be a fixed light, in contradistinction to that on Cape Otway, and of sufficient power to be seen on a clear night at least twenty-five miles.

Ships, therefore, sailing in either direction through the Straits, would have the advantage of its auxiliary aid in obscure or misty weather.

No objection can be urged to the elevated position we assign to the Light, from the possibility of its being obscured temporarily by a land mist. During our survey this question was made one of special observation, with the wind scarce any two days from one quarter, yet the highest elevation was never once obscured by fogs.

A beacon of tar barrels was burnt on New Year's Island, distant seven miles in a direct line from the site of the proposed Light House, and was found of sufficient power to have been visible at a considerably greater distance, while at a lesser altitude than the site chosen for the Light on King's Island.

## IV.—RESOURCES OF THE ISLAND, PARTICULARLY AS REGARDS BUILDING MATERIALS.

Abundance of good durable stone can be easily procured within a quarter of a mile of the proposed site of the Light House, either compact basalt or sandstone, while granite of superior quality abounds in large quantities on both of the New Year Islands, but no traces of limestone could be discovered, neither shells or coral in sufficient quantities along the shores of the Island as a substitute.

The indigenous timber is wholly useless for building purposes, being crooked and stunted in growth, and not any one specimen we examined exceeded six inches in diameter; it furnishes, however, a ready and abundant supply of firewood, and further, we are glad to report that good spring water is also abundant and near at hand; the positions of some of these streams are shewn on the plan.

In spite, however, of these drawbacks, we are of opinion that a Light House could with ease and facility be erected of masonry, especially when stone of so durable a nature can be procured, and we are further led to this conclusion from the necessity of a durable structure occupying the exposed site selected for the Light House.

## V. MANNER OF INTERCOURSE WITH THE ISLAND, AND FACILITIES FOR LANDING STORES.

Ineffectual attempts were made by us to land on the north and north-east coasts, but were rendered abortive by the heavy surf constantly breaking on the shore, even in the finest weather, and for this purpose the "Loelia" was anchored in Disappointment Bay, but afterwards permanently, during our stay, removed to Franklin Roads, found to be a tolerably safe anchorage for small vessels, and we have since practically ascertained that the only place where a landing can be effected is the small sandy beach close to the wreck of the "Whistler," even here impossible with a strong north-westerly breeze.

This landing place is distant about twelve or fourteen miles from the site of the proposed Light House; the track we pursued to reach the spot is indicated by the red line on the plan; part of the road lay across a heavy sandy beach, impracticable for drays even without a load. This fact, in connexion with the impossibility of effecting a landing on the north coast, induced us to ascertain the practicability of forming a road inland across the flats, and small ranges behind the sand hills, and we are satisfied that it would be a task of little difficulty, involving no great outlay, to open a good bush road sufficient for the purposes required in the conveyance of those heavy articles that would have to be landed and transported to the site of the Light House during the progress of the works.

## VI. GENERAL REMARKS.

We deemed it our duty, before closing our survey, to ascertain the number, the nature, and circumstances attending some of the most remarkable of those shipwrecks that have occurred along the western coast of King's Island during the past two years, which we have gleaned from parties resident on the island, and sufferers from the earliest of these catastrophes.

Thus

Thus we have ascertained that within the past eighteen months the following vessels have been wrecked on the western shores of King's Island, viz.: ship, "Brahmin;" schooner, "Waterwitch;" schooner, "Agnes;" ship, "Whistler;" brig, "Maypo;" schooner, "Elizabeth;" and it is not merely a conjecture when we express our opinion that three of these calamities would, in all human probability, have been avoided had a light been erected prior to that period. These vessels, the "Brahmin," "Maypo," and "Whistler," were driven on shore at night by the force of strong north-westerly gales and a current which we have ascertained to be singularly influenced by these winds.

Their commanders were ignorant of their position; yet within the orbit of that beacon, even in misty weather had it been erected, they drifted on unsuspectingly, and in three instances aduced, not only were the vessels and cargoes lost, but they resulted also in a lamentable loss of human life.

Again we would, before closing our Report, urge the necessity of a Light House being erected on King's Island; fragments of wrecks cover its coast, doubtless the remains of vessels missing, whose fates have never been ascertained, and we are convinced it is a measure the importance of which can only be appreciated by actual examination of the localities, and the result of this examination has convinced us that within the compass of our duties lies an earnest recommendation to your Excellency that this great work be speedily accomplished.

M. G. H. W. ROSS, Com. R.N.,  
Chairman.

JAMES RUSDEN.  
WILLIAM H. BURGOYNE.

Melbourne, 15 September, 1855.

## C.

## AUSTRALIAN HIGHWAY LIGHT HOUSES.

Name of the Light House.	Quality of the Light.	By what Colony or Colonies maintained.	In which Colony situated.	Whether erected or not.
Cape Borda .....	1st class ..	South Australia .....	South Australia .	In course of erection.
Cape Willoughby.....	1st class ..	South Australia .....	South Australia ..	Erected.
Cape Northumberland....	1st class ..	South Australia .....	South Australia .	In course of erection.
Troubridge Shoal .....	2nd class ..	South Australia .....	South Australia ..	Erected.
Cape Otway .....	1st class ..	Victoria .....	Victoria .....	Erected.
Cape Schank.....	1st class ..	Victoria .....	Victoria .....	Recommended to be erected.
Cape St. George .....	1st class ..	New South Wales .....	New South Wales	Recommended to be erected.
Sydney Heads .....	1st class ..	New South Wales .....	New South Wales ..	Erected.
Moreton Island .....	1st class ..	New South Wales .....	New South Wales	In course of erection.
Nobby's Island, Newcastle	2nd class ..	New South Wales .....	New South Wales	In course of erection.
Goose Island } Banks'	1st class ..	Tasmania .....	Tasmania .....	Erected.
Swan Island } Straits.				
Bruny Island .....	1st class ..	Tasmania .....	Tasmania .....	Erected.
Kent's Group .....	1st class ..	{ New South Wales Victoria Tasmania	Tasmania .....	Erected.
Gabo Island } Cape Howe }	1st class ..	{ New South Wales Victoria	Victoria .....	Erected.
Wilson's Promontory ....	1st class ..	{ New South Wales Victoria	Victoria .....	Recommended to be erected.
King's Island .....	1st class ..	{ New South Wales Victoria Tasmania	Tasmania .....	Recommended to be erected.



1856.

NEW SOUTH WALES.

LIGHTHOUSES ON THE AUSTRALIAN COAST.

(EVIDENCE TAKEN BEFORE THE COMMISSIONERS.)

Ordered by the Legislative Assembly to be Printed, 18 December, 1856.

MINUTES of Evidence taken before the Commissioners appointed by the several Colonial Governments of NEW SOUTH WALES, TASMANIA, VICTORIA, and SOUTH AUSTRALIA, to inquire into and report upon the subject of Lighthouses on the Australian Coast, together with the proceedings of the Commissioners.

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PROCEEDINGS OF THE COMMISSION.

Government Offices, Melbourne.

TUESDAY, 5 AUGUST, 1856

**Present:—**

Mr. Champ in the Chair.

Mr. Browne, | Captain Kay, R. N.

The Commissioners having assembled, proceeded to read the letter of the Chief Secretary of New South Wales on the subject of the establishment of a Board of Officers representing the four Colonies of New South Wales, Tasmania, Victoria, and South Australia, to whom should be entrusted the erection and superintendence of the Lighthouses on the Australian coasts; and the replies from the various Colonies to the same.

Discussion ensued, and the Commissioners present agreed that it would be more desirable and satisfactory to the various Legislatures, and equally effective in obtaining the object contemplated, if an arrangement could be at once made for apportioning the expenses of the erection and maintenance of such Lighthouses as may be considered necessary for the safe navigation of the great highway to the several Colonies interested; and with this view the Commissioners considered it advisable at once to proceed to the examination of witnesses, with the view of determining whether the present lights were sufficient for the purpose, or whether any additional ones were requisite, and if so, in what situations they should be erected.

Mr. R. G. Gilmore, Captain of the steamer "Wonga Wonga," called in and examined.

Mr. W. H. Saunders, Captain of the steamer "Royal Shepherd," called in and examined.

James Rusden, Esq., R. N., Master of H. M. S. "Electra," called in and examined.

W. Morris, Esq., R. N., Captain of H. M. S. "Electra," called in and examined.

[Adjourned to to-morrow, at Ten o'clock.]

WEDNESDAY, 6 AUGUST, 1856

**Present:—**

Mr. Champ in the Chair.

Mr. Browne, | Capt. Kay, R. N.

Arthur Devlin, Esq., called in and examined.

Mr. Hugh Macneikin, called in and examined.

Mr. R. T. Moodie, Captain of the steamer "City of Sydney," called in and examined.

[Adjourned to to-morrow morning, at Ten o'clock.]

THURSDAY, 7 AUGUST, 1856.

**Present:—**

Mr. Champ in the Chair.

Mr. Browne, | Captain Kay, R. N.

Mr. John Lowdon, Captain of the steamer "Maid of the Yarra," called in and examined.

Mr. John B. Sydecrff, Captain of the steamer "Storm Bird," called in and examined.

Mr. Henry Tulloch, Captain of the schooner "Water Lily," called in and examined.

Mr. R. Knarston, Captain of the schooner "James," called in and examined.

Mr. Robert Williamson, Captain of the barque "Lady Hayes," called in and examined.

Mr. Joseph Walsh, Captain of the schooner "Eagle," called in and examined.

Charles Ferguson, Esq., Chief Port and Harbour Master of Victoria, called in and examined.

James Lawrence, Esq., called in and examined.

[Adjourned to to-morrow, at Ten o'clock.]

FRIDAY, 8 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne.

Crawford Pasco, Esq., R. N., called in and examined.

Mr. John Brown, Captain of the ship "Shalimar," called in and examined.

Mr. John Gover, Captain of the ship "Mindora," called in and examined.

Commander M. G. H. W. Ross, R. N., called in and examined.

Mr. Charles H. Langley, Captain of the ship "Annie Wilson," called in and examined.

Mr. William Bell, Captain of the steamer "Yarra Yarra," called in and examined.

[Adjourned to to-morrow, at Ten o'clock.]

SATURDAY

SATURDAY, 9 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Mr. Douglas took his seat at the Board as the Commissioner appointed by the Government of South Australia, and explained that in consequence of the South Australian Government not having received His Excellency the Governor General's intimation of the date on which the Conference would assemble until the 1st instant, he had not been able to be earlier present at the meetings of the Conference.

Mr. Thomas Wing, Captain of the schooner "Pioneer," called in and examined.  
B. R. Matthews, Esq., called in and examined.

[Adjourned to Monday next, at Ten o'clock.]

MONDAY, 11 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Mr. George Doran, called in and examined.  
Mr. George Kelly, Captain of the barque "Monarch," called in and examined.  
Mr. Edward Reynell, Captain of the ship "True Briton," called in and examined.  
Mr. Francis Rozea, Captain of the brig "Wanderer," called in and examined.  
Mr. William Shepherd, Captain of the "Euphemia," called in and examined.  
Mr. William Watts, Captain of the steamer "London," called in and examined.  
Mr. Anthony Enright, Captain of the ship "Lightning," called in and examined.  
Mr. W. H. Lamont, Captain of the steamer "White Swan," called in and examined.  
Mr. Colin Brown, called in and examined.

[Adjourned to to-morrow, at Ten o'clock.]

TUESDAY, 12 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Mr. G. V. Bentley, Captain of the steamer "City of Hobart," called in and examined.  
Mr. Alexander White, Captain of the steamer "Champion," called in and examined.  
Mr. W. H. Hawkins, Captain of the steamer "Queen," called in and examined.  
Mr. George Gilmore, Captain of the steamer "Telegraph," called in and examined.  
W. H. Norman, Esq., Commander of the Victorian Government steam sloop "Victoria," called in and examined.

Bloomfield Douglas, Esq., Master of the Trinity House of South Australia, the Commissioner appointed by the South Australian Government, examined.

[Adjourned to to-morrow, at Ten o'clock.]

WEDNESDAY, THURSDAY, AND FRIDAY, 13, 14, & 15 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

The Commissioners embarked on board the "Victoria" steam sloop, and proceeded to sea, examining the lights on Shortland's Bluff when passing between the Heads. At an early hour on the 14th, the "Victoria" approached Cleft Island and enabled the Commissioners to view that locality closely. On leaving Cleft Island the Rodondo was neared, and afterwards the Ten-foot Rock. The Commissioners then landed at a small bay to the northward of the south-east pitch of Wilson's Promontory, and proceeded to attain the summit of that point, in order to establish a site for a lighthouse, on which, when selected, a flagstaff was erected. Having re-embarked, the "Victoria" proceeded to Waterloo Bay, where good shelter exists for large and small craft. The examination of the vicinity of Wilson's Promontory being terminated, the "Victoria's" course was directed towards Cape Schanck, which headland was observed from that vessel on the morning of the 15th instant, after which she entered the Heads, proceeded through the south channel, and finally anchored in Hobson's Bay on the same afternoon.

[Adjourned to to-morrow, at Ten o'clock.]

SATURDAY, 16 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Draft Report considered.

[Adjourned to Monday next, at Ten o'clock.]

MONDAY

MONDAY, 18 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Draft Report further considered.  
[Adjourned to to-morrow, at Ten o'clock.]

TUESDAY, 19 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Draft Report further considered.  
[Adjourned to to-morrow, at Ten o'clock.]

WEDNESDAY, 20 AUGUST, 1856.

**Present:—**

Captain Kay, R. N., | Mr. Browne,  
Mr. Douglas.

Captain Joseph Lawson, called in and examined.  
Draft Report further considered.  
[Adjourned to to-morrow, at Ten o'clock.]

THURSDAY, 21 AUGUST, 1856.

**Present:—**

Captain Kay, R. N. | Mr. Browne,  
Mr. Douglas.

Draft Report further considered, and agreed to.

## MINUTES OF EVIDENCE.

TUESDAY, 5 AUGUST, 1856.

**Present :**

MR. CHAMP IN THE CHAIR.

MR. BROWNE,

CAPTAIN KAY, R.N.

Captain Robert Graham Gilmore examined:—

1. Do you command the steamer "Wonga Wonga?" Yes.
2. How long have you been employed in the Australian trade? About two years altogether. I have been about twenty months in the "Wonga Wonga"; and I have been backwards and forwards several times from England—once in the mail steamer "Australian." I have made about fifty voyages now in the inter-colonial trade.
3. Are you aware of any difficulties being experienced in the inter-colonial trade, particularly in Bass's Straits, in consequence of there not being a sufficient number of lights, or of their not being properly placed? We are frequently retarded by thick weather. For the benefit of sailing vessels more than of steamers a light about Jervis's Bay would be of great service.
4. In proceeding to the southward you do not find the want of that light, do you. It is in proceeding from the southward to the northward you find the difficulty? Yes; and in summer time especially, because we keep close into the land to avoid the current which runs generally strong to the southward at that period.
5. Do you ever find an indraught setting into that headland which makes the north head of Jervis's Bay? Yes; there is a deep bay, called Wreck Bay, where several vessels have been lost. It is a large bay.
6. Have you ever found yourself drifted into that bay? Yes, several times; and I have had to haul out.
7. And you think that a light on that head would be of considerable benefit to ships coming from the southward? Yes; or vessels coming from abroad making the land.
8. To any vessel coming from the southward it would be of advantage to have a light at Jervis's Bay? Yes, I think so, decidedly.
9. Has the light on Cape Howe been found to be of much service since it has been established? Of great use; but it is hardly vivid enough. I have been very close to it without seeing it, when a light like that at Cape Otway would have pierced three times the distance through the thick atmosphere or mist then prevailing.
10. Do you think that it is attributable to any defect in the position of the light itself or to the atmosphere that surrounds it? It is not a sufficiently good light for that position, which is excellent. I have been within four or five miles of it and could only just make it out, when I ought to have been able to see it twelve miles off. On a very clear night you might see it eighteen miles off.
11. From Cape Howe to Port Philip Heads what other difficulties have you encountered that would render an additional light necessary? It is a long distance to steer on one course, viz., two hundred miles, the set of current is sometimes strong and always uncertain.
12. Would a light at Wilson's Promontory be a sufficient guide to carry you clear of the Seal Islands? Yes, a first-class light; they are about eighteen miles from the promontory.
13. Do you find the light on Kent's Group of much use? It is a magnificent light. I have seen it forty miles, and it has been seen fifty-six miles off; but it is very frequently capped by vapour.
14. Have you any reason to think that it would be advantageous to remove it to any other site. I have never been on Kent's Group, so that I could not say.
15. Do you think it might be more advantageously put in any other position than on Kent's Group? It must be very useful to vessels going to Van Diemen's Land or through the straits, and I should not like to recommend its removal.
16. Would you place the light at Wilson's Promontory on the promontory itself, or on one of the islands in that neighbourhood? A light on the promontory itself would only guide us in coming from Cape Howe, and from the west or south westward.
17. Then for vessels coming from the northward the promontory would be the proper place for the light? From the north-eastward or south-eastward.
18. But in coming from the westward would that light be equally effective? It would be no use to vessels coming from the north-westward.
19. Is there any other position for a light there which you would recommend? There is a rock there, called the Ten-foot Rock, which would serve for vessels coming from the westward. I landed upon it at the request of Captain Ferguson, some months back, to ascertain if there was a sufficient base for a light-tower, and found there was ample space.
20. Would the island of Rodondo answer as a site for a lighthouse? It would be very difficult to put a lighthouse there and to communicate with it when it was there.
21. Then a light at Wilson's Promontory, in your opinion, would be of no use to vessels coming from the westward, but only to vessels coming from Cape Howe? From the north-westward, the Glennies and other islands would shut it in.

Capt. R. G.  
Gilmore.  
5 A 10, 1856.

- Capt. R. G. Gilmore.  
5 Aug., 1856.
22. If the light were erected on Wilson's Promontory, would it not be necessary for vessels leaving Port Phillip to have some additional light between Port Phillip Heads and the promontory? It would be desirable to have a light on Cleft Island, but that is as inaccessible as Rodondo.
23. Are there any headlands between Port Phillip Heads and Wilson's Promontory that would be available for a lighthouse? No, not for a guide round the promontory.
24. Do you consider an additional light on Cleft Island to be requisite for the navigation between Melbourne and Sydney? Yes, at Cleft Island, if it was possible to get a lighthouse there. There is frequently quite smooth water, but it is inaccessible.
25. Is there any port or beach where a boat could land? No.
26. Are there any of the headlands between that and the heads of Port Phillip, on which you consider it would be advisable to put an additional light? I think there is no necessity for two lights. I think a lighthouse upon the Ten-foot Rock would answer the purpose of both; and in nine cases out of ten it would be accessible.
27. You think a lighthouse on the promontory would not be available for vessels passing both ways; but a lighthouse on the Ten-foot Rock would be available for all purposes? Yes; I think so.
28. A light on the promontory would necessitate the erection of a light somewhere else? Yes.
29. But a light upon the Ten-foot Rock would answer the purpose of all? Yes, if the tower was a good height.
30. What is the area of the Ten-foot Rock? About 60 feet by 40; and it is about 20 feet out of the water at high water on the eastern side, and on the western side perhaps 15 feet.
31. Is there sufficient base to afford fastening for a lighthouse? Yes, quite so, and there is almost a natural landing place. I had very little difficulty in getting ashore, and I have frequently steered down towards it to watch how the surf broke on it, and I have never seen the green sea break over it;—the spray dashes over it sometimes. I think a few heavy stones piled up would test how a lighthouse would stand.
32. You think it would answer for the erection of a lighthouse? I am confident of it. The promontory is only four miles off, and material could be wrought on the promontory and taken to the rock. It is only about eight miles from Refuge Cove, a beautiful little harbour, where there is good anchorage for a vessel in all weathers.
33. Which is the usual passage for vessels going eastward? Between Wilson's Promontory and the Ten-foot Rock for steam vessels.
34. What height would you advise the lighthouse to be made if it was put there? It would have to be a great height.
35. At what distance ought the light to be visible? Twenty-five miles, at least.
36. Why should it be visible twenty-five miles? On account of the Seal Islands; they are very dangerous, and they are to the north-north-east of the Ten-foot Rock.\*
37. Then it is only in coming from the northward you would require to see it twenty-five miles off. In coming from the westward would you require to see it that distance? No; it is only nine miles from the outer rock or island in that direction. I suppose for a light to be visible twenty-five miles it would require an elevation of about 200 feet. The height of the mastheads of vessels averages about 50 feet.
38. Supposing it should be found impracticable to build a lighthouse on this rock, what, in your opinion, would be the next best site? On the promontory itself, because then vessels coming from Port Phillip would go to the southward in thick weather; and when they were far enough, the light would open out clear of the Glennies and Cleft Island.
39. Is the promontory high land? It is about 200 feet in height at the extreme end of it.
40. Are the Commission to understand that, in your opinion, if a light is put on Wilson's Promontory there ought to be two lights, one on the promontory and one on the islands to the westward of it? Yes.
41. Still you think a single light on the promontory would be of great assistance to the navigation? No doubt of it. We should only have to steer more to the southward during bad weather in leaving Port Phillip; now we steer directly for the islands in fine weather.
42. Is Hogan's Island at all dangerous? It is a danger. A light on or about the promontory would lessen it.
43. Do the clouds hang about the lighthouse at Kent's Group, when it is clear below? We hardly ever go close enough to the Kent's Group to see.
44. In approaching the harbour of Port Phillip are you of opinion that anything is wanting in the way of lights? A light on Cape Schanck would be of great service.
45. Do you consider a light on Cape Schanck would be preferable to a light on Point Lonsdale? In coming from the promontory towards Port Phillip Heads, Cape Schanck projects a good deal, and a light on Point Lonsdale might be obscured by it.
46. Do you think Cape Schanck would be a sufficient departure to enable you to open the Shortland's Bluff light without difficulty? Yes.
47. You speak merely as a mariner coming from Wilson's Promontory up to Port Phillip Heads—what would be your opinion as to a vessel coming from Cape Otway. Would not a vessel have to go to leeward of her port with a north-westerly wind if the light were on Cape Schanck instead of Point Lonsdale? There would be no occasion to run to leeward, the Schanck light would be a good and certain guide to prevent that.
48. A light on Cape Schanck would be quite available for ships coming from the east? Yes.
49. And of great service to vessels coming from Cape Otway? Yes, of great service.

50.

\* I quite forgot to mention the eastern Seal Island, although I had often thought of it as an eligible position for a guide to the promontory, and as a beacon for the dangers in its own immediate vicinity.  
R. G. G.

50. Would not you be able to make the Schanck at a reasonable distance without going to leeward? You would make the Schanck on the starboard bow. Capt. R. G. Gilmore.
51. Have you ever considered the question of the lighting of the two points at the entrance of the straits; that is, Cape Otway and King's Island? I have often considered and talked about it. I have never been on shore at King's Island. Aug., 1856.
52. In making the straits did you ever sight King's Island? Yes.
53. During your experience have you generally made the entrance to the straits in fine weather or bad weather? I think most frequently in bad weather.
54. Have you considered whether any light on King's Island would be of assistance to the navigation, seeing that there are extensive reefs running out some seven or eight miles from King's Island? I am afraid if a light was put on King's Island it might bring vessels coming from the southern ocean into danger on a lee shore or amongst the reefs that would be outside the light.
55. Then you think a light there would be more detrimental to the safe navigation of the straits than if the island were left unlighted? It is a matter of opinion.
56. In coming from the westward, would you, if there was a light on King's Island, hug that shore, or would you, as you do at present, hug the northern shore by Cape Otway? I should always keep well to the northward.
57. Is there any particular current, that you are aware of, which sets from Cape Otway in any particular direction? I cannot say as to any particular current; there is a strong tide there.
58. Is there any current which causes ships to be set down a great deal on King's Island? Not that I am aware of. I think a light on King's Island would not be really so advantageous as it is generally considered it would be.
59. Is it not contrary to all principle to light inside a danger? Yes.
60. Would it not be more likely to bring a vessel on those reefs, if, in thick weather, she were trying to make the King's Island light than if she knew there were no light at all on the island, and hugged the northern coast and made Cape Otway? Yes. It would be only in very fine weather they ought to attempt to make King's Island.
61. What would you think of putting a light on the New Year Islands? I think it would be worse. I knew an instance of one vessel which sighted the New Year Islands and passed between the Harbingers and the main land. They thought the New Year Islands was the north part of King's Island, and in trying to avoid it they went in between the reefs and the main land without knowing at the time until they saw the sea breaking outside them.
62. At what distance have you seen the Otway Light? I think I saw it about sixteen miles off last time. It was then very dirty weather.
63. Your opinion has been given principally with reference to vessels running into the straits from the westward? Yes.
64. If you were working out of the straits to the westward, bound to India for instance, do you think then that any advantage would be gained by having a light upon King's Island? Yes, I think it would.
65. In standing across to work out of the straits, you think a light on King's Island would be useful? Yes, I think it would be very useful; and it would also be a guide to vessels in heavy westerly weather to get under the lee of King's Island into smooth water.
66. The passage to the southward of King's Island, between the island and the main land of Tasmania, is seldom or never used, is it? I have never been there myself.
67. If any light were erected upon King's Island, should it not be, of necessity, a very powerful light—the most powerful that could be obtained? Yes.
68. Have you any means of ascertaining your position in the entrance to the straits by the soundings? I never have been able to do so, but the water gradually shoals towards the main land, say at Cape Northumberland, and Portland and Cape Otway.
69. You have no means of knowing whether the soundings would give you any guide when you could obtain no observation? I never attempted it myself. I believe the soundings are very correct, but I think there is too much sameness in them across the entrance.
70. Is there any difference in the soundings which would show whether you were to the northward or the southward? I cannot say from my experience.
71. Generally, the conclusion to be drawn from your evidence is, that for vessels coming from the westward a light on King's Island would be rather dangerous than beneficial? At times it would.
72. On the whole, do you think it would be so? As there is only one light, viz., Cape Otway, now, I do not think it would; but if there was a light on Cape Bridgewater or Cape Nelson, I think it would be better without a light at King's Island.
73. Then on the whole you do not think it would be more dangerous than otherwise? Not on the whole.
74. To vessels going from the eastward, you are clearly of opinion that a light on King's Island would be very useful? Yes; and I think, with caution, a light would not be dangerous on King's Island; but the great anxiety to make a quick passage might lead ship masters to trust too much to the light on King's Island.
75. Supposing the light were visible at twenty miles, would not any man, the moment he saw the light, keep away to the northward? Certainly he would, if he could or thought he could clear the dangers.
76. Have you been also to the westward of Cape Otway; that is, to South Australia? Yes, eight or nine times.
77. Are there any points upon that coast to the westward of Cape Otway which appear to you to be defectively lighted? I think a light on Cape Nelson would be a very useful light indeed.
78. If there were a lighthouse on Cape Nelson, would that give you a good departure to Kangaroo Island? Yes.

- Capt. R. G. Gihmore.  
5 Aug., 1856.
79. Would you think it absolutely necessary that there should be a lighthouse either on Cape Northumberland or Cape Nelson? I think it would be important to have one upon each. Vessels coming from England would not like to haul up to make Cape Northumberland, but they would make Cape Nelson, because they would have Portland under their lee in case of a difficulty; but it would be useful for vessels coming from Adelaide to have a light at Cape Northumberland; there are very nasty reefs all along that coast.
80. Are you of opinion that over-sea ships would endeavour to make the light on Cape Nelson in preference to Cape Otway? It would depend upon the weather; but for safety sake, I think they would try to make Cape Nelson first. If they could make Cape Nelson, if the wind were blowing hard from the southward they could reach off to the north-west; and if blowing from the south-west they could haul off to the south-east.
81. And you think nothing further would be necessary between Cape Northumberland and Kangaroo Island, and Backstairs Passage? If Cape Northumberland and Cape Nelson were lighted, it would at all events give a fair opportunity of reaching the light in Backstairs Passage without much difficulty.
82. Are you to be understood to say, that decidedly you would recommend a light to be placed on Cape Schanck in preference to Point Lonsdale? Decidedly.
83. A light on Point Lonsdale would not be visible to ships coming from Wilson's Promontory until after they got round the Schanck? Not in thick weather; and there is a tremendous indraught from south-westerly gales, so much so that I have had to haul out two points from my course in consequence, to make up for this indraught.
84. A ship in mid-channel, between the main lands, coming from the westward would see Cape Schanck lighthouse? Yes.
85. You say the light on Gabo Island is a very indifferent light? Yes; I think it would be better if it were more powerful.
86. If you placed a light upon some part of the land near the entrance of Jervis' Bay, on which headland would you put it? Either upon George's Head or Point Perpendicular.
87. You give the preference to Cape Nelson over Cape Bridgewater, in the first place in consequence of its being the most southerly point of the two, and because of its being nearer to Portland? Yes; to give a guide to Portland for refuge in south or westerly gales, and to warn off the land in east or south-easterly gales.
88. There is a great deal of difference between its being desirable if possible to have lights and its being to a certain extent necessary for the safety of vessels coming here. Which of the positions you have spoken of do you consider as being the one on which the first lighthouse ought to be erected; which is in your opinion the most pressing of all the points you have alluded to, taking into consideration not only the trade between here and Sydney, and England, but also Van Diemen's Land? For all classes of vessels I should say Cape Nelson or Cape Schanck.
89. A light at Cape Nelson would be of no use to a vessel coming from Launceston or Hobart Town? A light at Cape Schanck would be very useful to them.
90. Do you think that the first light to be taken in hand should be either Cape Nelson or Cape Schanck? Yes; I think so.
91. Considering that a light on Cape Nelson would be of no use to vessels coming from Launceston or Hobart Town, which of the two do you think it would be most desirable to erect first? When passengers come from the westward they come in such large numbers, 500 or 600 in each ship, that makes it more important.
92. Then you would give the preference to Cape Nelson as being the most pressing? Yes.
93. And next to that Cape Schanck? Yes.
94. Cape Schanck is the one in which all the Australian Colonies are most interested? Yes.
95. But the other would be most useful to vessels coming from the westward? Yes.
96. Have you ever been to Hobart Town? Yes, but a long while ago.
97. Are you prepared to give any opinion as to the navigation to that place? No.
98. Do you think it would be more desirable to put a light on Cape Schanck than on King's Island? Decidedly.
99. Have you any other suggestion to make to the Board? I should like to let it be understood that the reason why I object to a light on King's Island is on account of the outlying dangers. I think it would be likely to inveigle vessels on to the reefs which surround King's Island, through their not being able to judge of the distance at which they were from the light. [*The Witness withdrew.*]

Captain William Henry Saunders examined:—

- Capt. W. H. Saunders.  
5 Aug., 1856.
100. What vessel do you command? The "Royal Shepherd."
101. How long have you been engaged in the inter-colonial trade? Since 1840.
102. What ports have you principally traded to? Hobart Town, Launceston, Sydney, and Melbourne; I was trading between Sydney and Melbourne till 1850, and between Launceston and Melbourne for the last five or six years, and I was for a short time trading between Hobart Town and Sydney.
103. Your first experience was in trading between Sydney and Melbourne? Yes.
104. During your experience have you found any difficulty in the navigation of that particular track, in consequence of no part of the coast being lighted except the Howe and Sydney Heads? Yes, I have often felt the want of a lighthouse at Cape George in running up the coast in thick weather.
105. Is that in coming from the northward or running up from the southward? Running up from the southward.
106. Do you conceive that Cape George is a point that ought to be lighted? I think so.
107. That is at Jervis' Bay? Yes.



108. If that part of the coast were to be lighted on which headland would you place the light, would you place it upon Cape George or upon Point Perpendicular? On the southward point, Cape George, because it is higher than Cape Perpendicular and could be seen from the northward as well as from the southward. I knew an instance of a ship running right on shore with 300 prisoners on board, for the want of a lighthouse—that was the "Hive."
109. She was coming from the southward, was she not? Yes. The danger is in coming from the southward, because the south-east swell sets a sailing vessel in.
110. Would not that light be also beneficial in running for that bay in an easterly gale? Yes.
111. It is not accessible now of a night in consequence of not being lighted? Not unless a person is acquainted with the place.
112. Is Cape George the southern head of the entrance of Jarvis's Bay? It is the highest land there: it is to the south of it.
113. A light there would not mark the entrance to the bay? No, it would not. It would be in about the same position as the light at Sydney Heads.
114. Is there any very perceptible difference in the height of the two heads—Cape Perpendicular and Cape George? Cape George is about 200 feet higher than Cape Perpendicular.
115. But you are quite clear that a light on Cape George could be seen over Cape Perpendicular? Yes.
116. Is there any other part of the coast between Sydney and Cape Howe where any additional light would be necessary? I do not think so.
117. As a leading light no other light would be necessary but one on Cape George? No.
118. Have you had much opportunity of seeing the light at Cape Howe? I have seen it four or five times since it has been lighted. Since the erection of that light I have not been in that trade.
119. Have you observed that light? It is a very good light, but it can not be seen far off the deck.
120. Do you think it sufficiently powerful for a turning point? Quite; it is quite sufficiently powerful for a low light.
121. But if it could be made higher it would be very desirable, so as to give a greater radius of vision? Yes; very desirable.
122. After having rounded Cape Howe are there any positions or dangers in the straits which have come practically under your notice as requiring to be lighted? I think there ought to be a lighthouse about Wilson's Promontory.
123. Have you ever landed on the promontory? Yes; I was there about three weeks ago.
124. Would a lighthouse placed upon the promontory be available for the trade both coming from the eastward and from the westward? I think it would be rather a difficult thing to place a lighthouse so as to be seen on both sides of the promontory, and if placed too high it is often obscured by fogs and clouds in bad weather.
125. You think it would be a difficult thing to place a light on the promontory itself so as to be visible on both sides? Yes.
126. Is there any rock near the promontory that you are aware of that would be a better position for a light than the promontory itself? The Rodondo would be a better position if it was possible to put a lighthouse there.
127. Have you ever landed on the Rodondo? No, never.
128. You do not know whether it is accessible or not? Judging from appearances I should say it was not.
129. Do you know Cleft Island? Yes.
130. Would it be possible to put a light there do you think? That is as bad as the Rodondo.
131. Do you know the Ten-foot Rock? Yes.
132. Would it be possible to put a light there? I do not think it would. It would be much worse than the Eddystone.
133. Supposing it possible to put a light on any of those rocks, would it be a better site than the promontory itself? I think it would not.
134. But you are not aware of any rock or island there on which you could put a light? No. You could put one on Hogan's Island, but that is too near Kent's Group.
135. Supposing it practically impossible to put lights on any of those rocks, would you recommend a light being placed on Wilson's Promontory? Yes.
136. So as to be visible on which side, as you say it could not be visible on both? I think it unlikely that it would be visible on both sides; I do not say it would not be.
137. On which side could it be placed most advantageously? I think on the west side.
138. That would be of no service to ships coming from the north-east? No; I have seen the light on Kent's Group from between the Rodondo and Mon Couer; and I have been in between the Judgment Rocks, within ten miles of it, and have not seen it on a night when the stars were out, the lower part would be clear, but the upper part, where the light is, would be in a mist. I think the light on Kent's Group is too high. The other day I passed between the island and the Judgment Rock, close to it, and there was no cloud to be seen anywhere else, but you could not see the light for the mist.
139. If it had been lower would you have seen it then? Yes; but then it is such a large island, that if it were lower you would only be able to see it on one side.
140. Now it is visible all round? Yes.
141. Supposing the engineering difficulties to be got over with respect to the Ten-foot Rock, do you think that it would be a good place to put a light for Wilson's Promontory? No.
142. But in your opinion the engineering difficulties are insuperable? I think so.
143. And in that case you would prefer the promontory? Yes; the pitch of the promontory.
144. In proceeding from Wilson's Promontory, what is the next point that you think deserves the attention of the Colonial Governments with reference to a lighthouse? Cape Schanck.

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145. Decidedly Cape Schanck? Yes.
146. Would Cape Schanck be useful, as a headland light in coming both from the eastward and westward? Yes; in coming from the westward, when vessels leave the Otway light they run a certain distance in a course. They can do that in a couple or three hours, and if they gave the western land a good berth they could pick up the Schanck light with a cross bearing.
147. Would it not throw them to leeward of their port? I think the light should be seen twenty miles and give them time not to run to leeward.
148. Do you think it would be advisable to have a light on Cape Lonsdale, or do you think that with the Schanck light the Shortland's Bluff lights would be sufficient? I think the Shortland's Bluff lights would be sufficient. Too many lights would be apt to confuse a stranger.
149. Do you consider that the Schanck light and the promontory lights are absolutely necessary, or do you think with ordinary care the straits are sufficiently lighted without those additional lights? I think there ought to be a light on Cape Schanck under any circumstances. I have no doubt Western Port will come into notice as a coal port, and the Schanck light would serve as a harbour light for Western Port.
150. But would it be required as a leading light for general navigation? All vessels coming from the eastward or southward would make up for Cape Schanck; and vessels coming from the westward it would also be a serviceable light to, in running up the bay.
151. And you think it would really be an effective light and one which would be beneficial to the general navigation of the straits? I do.
152. The promontory light you are not so strongly in favour of as being absolutely necessary? I think there would be some difficulty in putting a light there.
153. But supposing all these difficulties not to be insurmountable, which do you think would be the most advantageous light to erect at once, Cape Schanck or the promontory? Cape Schanck.
154. Do you know anything of the coast between Port Phillip and South Australia? As far as Portland Bay; I cannot go further than that.
155. Are you aware of any necessity for a light on that side? Yes; I should say they require a light going to Adelaide; there are some nasty reefs off a place called Cape Jaffa, and I think a lighthouse below that at Cape Nelson would be desirable.
156. Your experience does not take you beyond Portland Bay? No.
157. And between Portland Bay and Cape Otway you think there is no necessity for any further light? No.
158. Considering the light at present in existence on Cape Otway, do you think it desirable that a light should be placed on the north end of King's Island? No.
159. Or any where in the neighbourhood of King's Island? Not at King's Island at all.
160. Can you give any reasons why you have arrived at the conclusion that a light would not be advantageously placed on King's Island, or any where in the neighbourhood? Ships would be apt to border on King's Island if there was a light there; they border more over to Cape Otway now than they would if there were a light on King's Island.
161. Have you frequently sighted King's Island? In fine weather you can see the island; in fine weather you do not require a light, and in bad weather you would not see the light if it was there. In all the cases of ships that have been lost there, if there had been a dozen lighthouses they would not have saved them. They got down to leeward before they found out where they were, the land being low.
162. And you think that no lighthouses under the circumstances would be available? I think not.
163. In your opinion the fact of there being a lighthouse at King's Island would rather encourage ships to border upon the island, which encouragement should not be given to them? Yes.
164. Then you would not light King's Island at all? No.
165. You would have the entrance to the straits lighted alone by Cape Otway? Yes.
166. Is there any fear in running for the straits in a heavy westerly gale of being thrown upon the main-land? Not with ordinary care.
167. There is, you think, no fear of being placed in a position of not being able to haul off if anything like ordinary attention is paid? I do not think so. If a man has not had a sight for four or five days, I should think it very wrong to run with a westerly gale.
168. Do you know the precise spot where the "Catariqui" ran ashore? No, not exactly.
169. There is an impression favourable to a King's Island light entertained by the Chambers of Commerce of this Colony and of New South Wales, and also of Tasmania; those bodies think it would be advantageous to the shipping interest that a lighthouse should be erected at King's Island; do you think their opinions are well founded or not well founded? I do not think they are well founded. I have been asked to attend the meetings of the Chamber of Commerce, but I have declined to do so on that very score. They were all for a lighthouse, and I was against it.
170. Do you know the Harbinger Rocks? Yes.
171. Are they above water? Yes.
172. Is there sufficient area on them on which a light-house could be erected? I do not think it; and there is too much swell.
173. If it were possible to put a light on the Harbinger Rocks, would that overcome the difficulty, in your opinion? I do not think it would be seen far enough to the southward. On the west side, in a gale of wind, when a ship gets to the Harbingers she is past the danger.
174. Your opinion is, that a ship has no business in the neighbourhood of King's Island at all? Yes; they ought to keep well to the northward, as there are no reefs, and a bold, safe coast; and I think a mariner, with ordinary care, had better border over on a bold coast than run down hap hazard towards King's Island.
- 175.

- 175. Are you aware of there being any particular set of the current in the neighbourhood of Cape Otway? I know there is an ebb and flow in shore, and the currents are occasioned by the winds, either east or west.
- 176. They are purely local, according to the direction of the wind. Yes.
- 177. Supposing it were decided that a light should be erected somewhere or other in the neighbourhood of King's Island, do you think that either of the New Year Islands would make a good site? Yes; the New Year Islands, in my opinion, would be the best site.
- 178. Better than either the northern extremity of King's Island, or the Harbinger Rocks? I have been twenty times within fifteen or twenty miles of the north-eastern extremity of King's Island, and on many occasions it has been hazy and thick.
- 179. And under those circumstances a light would have been valueless? Yes.
- 180. How many times out of the twenty has it been in that state—have you generally found it so, or have you generally had tolerably clear weather? Tolerably clear weather generally.
- 181. On those occasions a light would be of little or no use? No.
- 182. Have you any suggestions to make with reference to the lights generally in Banks's Straits? No, we do not require any more lights on the Launceston side.
- 183. You think the straits are quite sufficiently lighted for all purposes? Yes.
- 184. Even for vessels trading between this port and Launceston and Hobart Town? Yes.
- 185. The light in Banks's Straits is quite sufficient, you think, for vessels trading between Melbourne and Launceston, and also for vessels trading between Sydney and Launceston? Yes; and vessels going to Hobart Town always sight Kent's Gubup.
- 186. Supposing that the Government were only to decide upon putting up one additional lighthouse, which is the one you consider as the most important for the colonial trade; that is, to improve the navigation between Melbourne, New South Wales, Sydney, and Van Diemen's Land? The light at Cape Schanck.
- 187. Would that light be most conducive to the general benefit of the whole colonial trade? I have felt as much want of a light on Cape Schanck as ever I did one on the promontory. I have been more nervous in running for the Heads here with a southerly gale, than I have been in rounding the promontory.
- 188. If two lights were to be erected, which should you say would be the two most important? Then I should say Cape Schanck and the promontory.
- 189. Are you aware of any additional light being required on the east coast of Van Diemen's Land? It is many years since I was there.
- 190. Did you ever find any necessity for a light about Helen's Point, for instance? No.
- 191. Are the approaches to Storm Bay sufficiently clear to require no additional lighting? They have a light at Brunie Island.
- 192. Are there any further suggestions you would wish to make to the Commission? No.
- 193. The lighthouses at Swan Island and Goose Island are useful to all vessels coming from New Zealand to Melbourne, are they not? Yes; because they are driven sometimes through Banks's Straits.
- 194. What course do they generally take from New Zealand? They make for Kent's Group.
- 195. Then, under the circumstances alluded to by you—that Kent's Group is almost the starting point for vessels coming from so many places—is it not better that the lighthouse should be where it is, although it may be occasionally obscured, than to have it on a lower part of the island? I think it is in the best place in which it could be put in the island.
- 196. Are you aware whether the Brunie Island light is of any use to persons going to Sydney from Europe, coming from the westward? I think so.
- 197. Do you happen to know whether they generally sight it? I do not. If they made the land in the evening it would be of great use to them. *[The Witness withdrew.]*

Capt. W. H. Saunders.

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James Rusden, Esq., R.N., examined.

- 198. Are you the master of H. M. S. "Electra"? Yes.
- 199. Have you been on the coast of New South Wales in the ship to which you are attached? Yes, several times, and in other ships as well.
- 200. In navigating the coast of New South Wales, from Sydney to Melbourne, *vice versa*, in your opinion, to be lighted? The coast is not very dangerous, but a light on Point Perpendicular would be of great use in coming from the southward.
- 201. Have you ever approached that point so as to be able to judge of its extreme trading position? Yes.
- 202. And you think that a light there would be beneficial? Yes; any vessel coming from the south would find itself set in.
- 203. Are you aware whether any ships have been lost in that way? I have not been here at the time of any being lost, but I have always found myself set in there.
- 204. Is there any other point on that coast up to Cape Howe which you would consider necessary to be lighted? A light at the Twofold Bay would be of use.
- 205. Would it be necessary as a guiding light, or only as a local light? Both. Gabo Island is not much use as a turning light, in coming from the northward.
- 206. Would you consider that the light at Twofold Bay should be a first-class light? No.
- 207. Only one that would be available for running into the bay, and as a leading light if a vessel got close into the land? Yes.
- 208. Have you approached Cape Howe very close? Yes.
- 209. Have you had opportunities of judging of the position of the present light, and of its usefulness generally? I have been very close to it several times.
- 210. Have you found it bright? Yes, but it is too low.

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211. Would you recommend that it should be placed on a higher point of the island? Yes, or that the lighthouse should be built higher.
212. What is the height now? The Admiralty list of lights places it at 179 feet, but I do not think it is correct.
213. And you think it should be raised how much more? I think it should be raised so as to be seen at a distance of twenty miles.
214. Where would you place the lighthouse at Cape George? I consider that the light in the neighbourhood of Jervis's Bay should be erected on Crocodile Head—it being high table land, and visible over Cape George.
215. After rounding Gabo Island, and going through the straits to the westward, are there any points between Port Phillip Heads and Gabo Island which, in your opinion, are dangerous for want of being lighted? I think there ought to be another light in Bass's Straits.
216. At what point would you place that light? On the Rodondo.
217. Have you ever landed on the Rodondo? No.
218. Do you know whether it is at all accessible, or available for a light? I thought the other day, in passing, that I saw a place where one might land in moderately fine weather, when there was not much surf on.
219. If it were not practicable to place a lighthouse on the Rodondo, where would you place it? Cleft Island is the next best place; but that I think is equally inaccessible, and the Ten-foot Rock I think is worse; I have seen a sea go over it which would carry over a line-of-battle ship.
220. Have you ever considered the propriety of placing a light on the promontory itself? The promontory would be a very good place for all the coasting trade; but I doubt the possibility of placing a light there, to be serviceable to vessels coming from both east and west.
221. But you think it would not be available as a light for a great highway through the straits, either one way or the other—would it be useful if it were placed on the promontory? Certainly, it would be useful there, but it would not be the best position. There is a peculiarity about the Rodondo, which is, that I have never seen it capped, when the promontory has been capped close down to the water.
222. Have you had much opportunity of judging of the way in which the light on Kent's Group shows in ordinary weather? I have seen it an immense distance. It is a magnificent light. I have seen it as much as forty miles off.
223. Do you know whether it is frequently capped? I have never seen it obstructed once.
224. How many times have you passed it? I should think I have been near it eighteen or twenty nights in the last three years.
225. And it was always visible? Yes.
226. Are there any other points on the coast which you consider to be absolutely necessary to be lighted, for the safe navigation of these straits, either in that neighbourhood or more to the westward? Cape Schanck would be a very good coasting light; but I do not think it would be of any use to ships outward bound from England to Sydney.
227. Or to ships bound through the straits to India? Not at all.
228. In coming from the westward, you think no ship would seek to make Cape Schanck after having made Cape Otway? I am certain they would not.
229. In coming to Port Phillip Heads, would it be of any service to a ship to make the Schanck light, after passing Cape Otway? It would be of service in beating up with a north-west wind.
230. There are some slight dangers off the Schanck, are there not? They are above water.
231. You think it would be more useful as a coasting light than as a great highway light? Yes.
232. That would be for the colonial trade? Yes.
233. In ships coming from the westward, speaking now of the over-sea trade, do you think it would be preferable that the light should be placed on Point Lonsdale instead of Cape Schanck? The Schanck would be the preferable place of the two.
234. And you do not think there is any necessity for a light on Point Lonsdale? No.
235. In standing in to Port Phillip Heads any light upon Point Lonsdale would be useless as a leading light to the port, would it not, because you could not enter the harbour until you brought the lights on Shortland's Bluff in one? Yes.
236. And by that time you would be well over to the western land, would you not? Yes.
237. Taking the advantage to be derived, both for the colonial trade and for ships coming over from the westward, you think Cape Schanck is decidedly the most advantageous point on which a light could be erected? Decidedly.
238. And you see no necessity for a light on Point Lonsdale? None whatever.
239. Have you ever been to the north-west of the Otway light? Only in coming from England.
240. You have never been up either by Portland Bay or Kangaroo Island? No.
241. Have you any suggestions to make to the Board with reference to that coast? Not at all.
242. Looking at it as a navigator, would it be any advantage to the over-sea-trade to have a light any where to the west of Cape Otway? Yes; it would be a great advantage to have a light on Cape Nelson.
243. Do you prefer Cape Nelson to Cape Bridgewater? Yes; it is more projecting, and it would be also a good leading mark for Portland.
244. Do you think that ships coming from the westward would try to make the Cape Nelson light in preference to the Otway light, supposing there was a light there? I think they would.
245. Would not that throw them upon the land if they were running with the wind to the westward

westward and made the light at Cape Nelson. Is not there usually a chance of westerly gales coming round to the southward afterwards? To the south-west.

246. Would not that place a ship in an awkward position if she had sighted Cape Nelson? If she was very close in it would, no doubt.

247. You think there would be no danger of a ship being thrown upon that iron-bound coast? Only in case of her being very close in, and then a prudent man would not attempt to make it. You very frequently get thick weather in coming along the coast, and you might see the light when you would not be able to see the land, although steering for Cape Otway. I would not put a light there to steer for, but as a precaution.

248. Would not it be more likely to lead to mischief than to good? "I never think a lighthouse would lead to mischief unless there were so many of them that you did not know which was which."

249. Have you read the account given by Flinders of the way in which they made the land in the "Investigator" somewhere about Cape Nelson, and the gale went to the southward, and the ship was almost totally lost? Yes, but then he was looking out for the land.

250. Might not the same thing be more likely to occur in a merchant ship, under a large amount of canvas, than in a man-of-war with a larger compliment of hands on board than any merchant ship would carry? I cannot say.

251. You do not consider that the light should be steered for? No.

252. You do not consider a light there absolutely necessary? No, except for the Portland trade, and the coasting steamers to Adelaide.

253. That is not for the over-sea trade? Yes.

254. It might be an advantage, but there is no absolute necessity for it? Exactly.

255. Have you been as far as Cape Northumberland? Never.

256. Were you one of the officers who made a report to the Government relative to the erection of a lighthouse on King's Island? Yes.

257. Was that report unanimously agreed to by the officers signing it? Yes.

258. Then you entirely agree with what is stated there? Yes.

259. When you went down on that investigation did you land at Harbinger Rocks? No; they are scarcely above water—the sea breaks constantly over them.

260. Then it would be out of the question to put a lighthouse on them? Yes.

261. In this report you say: "No objection can be urged to the elevated position we assign to the light, from the possibility of its being obscured temporarily by a land mist. During our survey this question was made one of special observation, with the wind scarce any two days from one quarter, yet the highest elevation was never once obscured by fogs." What opportunity had you of judging of the nature of the atmosphere at King's Island? We were there for about twenty days.

262. Was there any rain while you were there? Yes, we had two or three very rainy days, and the wind blowing from all quarters.

263. Do you think the fact of a lighthouse being at King's Island would have a tendency to make ships border upon it more than is desirable? I think it would enable them to keep off the northern shore knowing there was another lighthouse south of Cape Otway. Cape Otway and King's Island are very nearly fifty miles apart. A man might go twenty-five miles farther south, knowing he was safe from the northern land, and he might sight King's Island instead of Cape Otway.

264. Is not that the course a man would take almost under present circumstances of steering for the middle of the straits, conceiving that twenty-five miles would enable him to see the Otway light? No; he would not see the Otway light twenty-five miles in dirty weather.

265. What is the greatest distance you have seen it? From twenty to twenty-four miles in fine weather.

266. Did you land at the New Year Islands? Yes, and went all over them. That report to the Government was drawn up after a great deal of consideration, and after living at King's Island and the New Year Islands for several days.

267. You think there would be no danger to shipping coming from the westward if this light were established there? Most decidedly not.

268. In working out of the straits, would not a light there be a greater advantage than in running in? It would perhaps be more serviceable in working to the westward than in coming from the west; but the number of vessels that work through is so small that it is not an important consideration.

269. You think there would be no fear of a vessel in thick weather, knowing that a light existed on King's Island, being brought into close proximity to the Harbinger Rocks before she was aware of her danger? I do not think she would be in any danger if she knew there was a light on King's Island.

270. Do you think, under any circumstances, that light would be seen outside the Harbinger Rocks in an ordinary gale of wind, misty, and with squalls—the usual style of weather we have when the wind blows strong from the west. Do you think a vessel would be safe in approaching King's Island, with a chance of seeing the light before she got upon the Harbingers? I think quite safe. The Harbingers are within a radius of five miles of King's Island, and a vessel would be sure to see the light within five miles.

271. From your report, it appears that you consider that the lighthouse should be elevated about 100 feet above the land on which it stands? Yes, that it should stand about 400 feet above the level of the sea. The land itself is 312 feet.

272. You have no hesitation in abiding by the report which you gave to the Government last year? Not the least.

273. Have you at all considered the positions in which vessels have been wrecked on King's Island, in regard to the advantage they would have gained if a light had been in existence there? We state in our report that we are confident they would not have been lost, especially the "Whistler," if there had been a light there.

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274. You made yourselves acquainted with the positions of those wrecks when you were on the island? Yes; we saw the remains of some of them, and I am certain the "Whistler" would have been saved if there had been a light there.
275. Were those vessels wrecked in coming from the westward? The "Whistler" was bound to the westward, and the "Elizabeth" had been down to the "Whistler" to save her stores, &c.
276. You think a light would have saved those vessels? The "Whistler" was lost in the night, and I am certain a light on Cape Wickham would have saved her; the "Elizabeth" ran upon a rock in the daytime, and was then run on shore to keep her from sinking.
277. Have you ever heard it stated that there is a set to the southward from Cape Otway to King's Island? I have found a strong set round the north side of the island to the southward from the Navarino Rock, between the Harbingers.
278. You heard the opinion expressed by the last witness as to the danger which he but anticipated would exist from vessels bordering upon the island if a light existed there? Yes; he took an extreme view of the case, that because a light was there everybody must steer for it.
279. But you think that would not be the case? I do not think that would be the case.
280. As master of one of Her Majesty's ships, would you, in running for the straits, consider yourself justified, from what you know of the navigation, in running to make this light? If I knew there was a light on King's Island I should run for the middle of the straits, instead of running for Cape Otway, with the chance of seeing both lights, being certain to see one.
281. What distance do you usually keep off the north coast in wishing to make the Otway light, in coming from the westward? I have been that road so seldom I can hardly answer that question.
282. You agree with the views taken by the Chambers of Commerce of the chief Australian Colonies, in thinking that it would be advisable to have this light established? I think it would be a very great benefit indeed.
283. No ship would use the channel to the southward of King's Island, you think? I have never been down there.
284. Do you consider that the light on King's Island should be a first-class light? Yes; a light that could be seen twenty-five miles off.
285. Have you been through Banks's Straits? Three times.
286. Do you consider the lights are very well placed there? Yes; the straits are very well lit.
287. In going round the south end of Van Diemen's Land does it appear to you that any additional light is required beyond the light on Cape Brunie? Tasman's Island would be the best site for an additional lighthouse, because it would be available for vessels coming from either way, and I think it would be of use to large ships from the westward, going round Van Diemen's Land to Sydney.
288. If you were navigating a vessel round Van Diemen's Land, would you consider it advisable to make Tasmania at all? I would make the eastern part of it, in preference to standing clear of the land, and making the coast of New South Wales.
289. And, therefore, a light there would be of advantage? Yes.
290. You think Tasman's Island would be the most eligible situation on the east coast for a light? Yes.
291. Have you heard of any inconvenience having been experienced from the want of a light on Tasman's Island? No, I never heard it mentioned.
292. Are you aware of any particular inconvenience having arisen from the want of a light in any of the situations you have spoken of? I have felt great inconvenience myself when near Wilson's Promontory for want of a light.
293. Do you know whether that has been experienced by others? I have had very little conversation on the subject, but speak from my own experience.
294. Do you think a light there would be more important than at King's Island? They are both important in their way, one for the coasting trade, and the other for the over-sea trade.
295. If one lighthouse only were to be erected, which would you recommend to be carried out? Wilson's Promontory.
296. And next to that King's Island? Yes.
297. And next to that? Cape Schanck. I think a lighthouse on King's Island would render the necessity for a light on Cape Nelson less.
298. And you think Cape Nelson and Cape George might come afterwards. Yes.
299. Do you think it might be safe to dispense with a light at Cape Nelson if there were a light at King's Island? Yes. You might put a small light there for the benefit of Portland.
300. Have you any other suggestions to offer to the Board on the subject which they have under consideration? I would suggest that the lights both at King's Island and Wilson's Promontory should be set about immediately, and also that an iron beacon should be immediately placed on the Crocodile Rock.
301. How high does the Rodondo Rock stand? 1130 feet it is marked in the chart. [*The Witness withdrew.*]

Captain William Morris, R.N., examined:—

Captain W.  
Morris, R.N.

5 Aug., 1856.

302. You are Captain of H. M. S. "Electra"? Yes.
303. You have been some time upon this coast? Three years and a half.
304. And have you passed frequently between Sydney and Melbourne? Yes, and I have been to Hobart Town once; and we have been cruising in Bass's Straits also during that time.
305. You have, therefore, had ample opportunity of judging of the dangers which exist in the navigation of the straits, and the mode in which those dangers are pointed out by lighthouses? Yes.

306. In navigating from Sydney Heads to Cape Howe, have you experienced any difficulty either in coming to the southward or going from the southward between those two points from the want of any lighthouse? None whatever. I think the lighthouse on Gabo Island is ample between Cape Howe and Sydney Heads: that is, in my opinion, the only light <sup>Captain W. Morris, R.N.</sup> required. 5 Aug., 1856.
307. Have you never seen the necessity for having a light upon Cape George, at the southern part of Jervis's Bay? Not for a vessel like the "Electra;" we give the shore a wide berth. It might be useful for a small coaster. I have never felt any want of a light there.
308. You conceive a large vessel coming out from England with passengers and goods would not necessarily approach the coast near enough for a light there to be of use. It is not absolutely necessary, I think.
309. In steering to the westward through Bass's Straits, after passing Gabo Island, are there any points in the navigation along that part of the coast, between that and Port Phillip Heads, that appear to you to require lighting? The long beach has not been surveyed; it is an unknown coast, and you must keep a great way off.
310. That is the Ninety-mile Beach. Yes. Kent's Group is a beautiful light; it is clear and distinct, and I would always in coming in at night run for Kent's Group. I do not see any very urgent necessity at all for a light either on Wilson's Promontory or the Rodondo. A light there would be an advantage to steamers coming along shore, but I do not think it would be any object to a prudent navigator with a large ship. A light at the Rodondo would be of great advantage to coasting vessels at night. When I have passed the Rodondo close I have always seen it very rough, and I should think that it is very difficult to get access to it.
311. Then in your opinion the Rodondo would be an impracticable spot to put a lighthouse on? Yes, without enormous expense and great difficulty.
312. Have you ever passed between the Rodondo and the promontory? No.
313. Then you have had no opportunity of judging of the nature of Wilson's Promontory? No.
314. Have you ever had an opportunity of seeing what they call Cleft Island? No; we have always given it a wide berth.
315. Having made Kent's Group, do you think that any other lights would be requisite than those which now exist on Shortland's Bluff to enable you to make Port Phillip Heads accurately? I think a light at Cape Schanck would be most desirable.
316. Does your observation apply to vessels coming both ways? I am speaking more with reference to vessels coming from the eastward to Port Phillip.
317. A light at Cape Schanck would be of no use to vessels beating out through the straits? No; it would be merely as a guide in coming to Port Phillip. When they made Cape Schanck light they would know their position, and would be able to make the harbour. I think it would be perfectly useless to have a light on Point Lonsdale.
318. In coming from the westward, do you think the Schanck light would be of any use to a vessel coming to Port Phillip? Not unless she ran to make it. It would be running out of her way, and she would be running too far to leeward; she would have seen the Otway light and King's Island light supposing there was one there. I think the Schanck light would be useful to any vessel beating about the straits, and trying to make Port Phillip harbour.
319. A vessel with a leading wind from Cape Otway would not think of sighting it? No, unless she ran out of her course in the night, and then the captain would know where he was by the light.
320. Would he not be in a very good position for entering Port Phillip Heads, and yet be in sight of the light as a cross bearing? Yes; you would see the Schanck light from the entrance of the harbour, or even from the westward of the harbour.
321. For a vessel bound to the eastward, not intending to enter Port Phillip Heads, the Schanck light would be of no use? No.
322. You think the promontory light would be an unnecessary expense excepting for coasters? Yes.
323. Which do you think would be most useful point for a light for the inter-colonial trade, Cape Schanck or the promontory? I think Cape Schanck generally for large ships as well as small. Cape Schanck light would be of the greatest possible benefit to this port.
324. You cruised about a good deal in that neighbourhood, did not you? Yes, a good deal, looking for missing ships. I have had many anxious nights, when I think a Schanck light would have given me certainty of safety, and have been a great guide to me.
325. Do you see any necessity for a light being placed on Point Lonsdale? None whatever: You can do nothing until you open the other lights, and a number of lights would only create confusion.
326. Have you ever been to the westward of Cape Otway on the coast at all? We made the land about Cape Nelson in coming out. I should myself think that Cape Northumberland would be the most desirable point, if a light were erected upon that coast.
327. Do you think that it would be at all desirable to have a light upon Cape Nelson, or would it not be likely to lead a ship into danger? I think Cape Northumberland would be better.
328. You have been cruising in the neighbourhood of King's Island? I have been a great deal there.
329. Have you sighted the land very frequently there in all weathers? Yes; I have been anchored there two or three times.
330. Have you observed whether the island is frequently obscured by haze, or whether it is usually clear? It has been usually clear when I have had opportunities of noticing.
331. Your observation has been from the ship? Yes. I have not seen it clouded.
332. In your cruises have you sighted the Harbinger Reefs? Yes; I have gone between them and the island two or three times.

- Captain W. Morris, R.N. 333. Do you think it at all practicable that a lighthouse could be erected on the Harbinger Rocks? Quite impracticable. There has been a good deal said about the position of a light at King's Island, and I have read Captain Ross' and Mr. Rusden's report, and I highly approve of the position which is pointed out in that report.
- 5 Aug., 1856. 334. What is your opinion as to the advisability or not of putting a light there at all? I think it most necessary, for the sake of humanity as well as for the protection of property.
335. You think a light there would not necessarily lead a ship into danger? I think it would prevent her being led into danger.
336. You know that it is contrary to all principles of facilitating navigation to light inside a reef, which this would be doing? The distance could be calculated so as to avoid that reef.
337. Do you think the light would be observable in any weather at a sufficient distance to prevent a vessel from getting on the reefs? I have no doubt in my own mind that it would be; and seeing the light they would know exactly where the reefs were, and it would be a guide to them to keep clear of them.
338. Have you seen the position of the New Year Islands? I have.
339. Are you of opinion that it would be desirable to put a light there? It would not show at all to a vessel coming from the eastward.
340. It has been given as the opinion of the master of one of the steamers that has been trading a good deal between Sydney and Melbourne, and also to Adelaide and other places, that a light on King's Island would be a disadvantage, and would be likely to lead vessels more into mischief than out of mischief—you do not agree with that opinion? I do not. To any prudent navigator it would be most useful, as it would point out the position of the Harbinger Rocks, and thereby give an opportunity of keeping well clear of them. The light on King's Island would be seen fifteen or twenty miles off, and never less than ten; and even if you were thrown close into the coast, you could run between the light and the Harbinger Rocks, if the light was there.
341. That is a passage you have taken in the "Electra"? Yes, in the daytime; not at night.
342. Do the Harbinger Rocks appear to you to be very formidable reefs? They are very easily seen, and the surf breaks very heavily there, even in very fine weather.
343. Have you had an opportunity of ascertaining whether any of the vessels which have been recently lost would have been, in all probability, saved from wreck if there had been a light on King's Island at the time, judging from the position they occupy on the beach? I do think that some of those vessels which were wrecked there would have been saved if there had been a light there, with the exception of those vessels which may have been wrecked in consequence of the crew being drunk and the ship not properly attended to. I think if there had been a light there, and the vessels had been carefully attended to, they would have been saved.
344. Do you think that the light ought to have any particular distinguishing feature, or should it be merely a simple fixed light of a high power? I think it would be better to be a light different from Cape Otway.
345. You have been also to Van Diemen's Land, have you not? Yes.
346. Have you passed through Banks's Straits? Yes, I have passed through them three times.
347. Is that highway sufficiently lighted? Yes. I think that the lights at Goose Island and Swan Island are very well placed and well lighted.
348. If one additional lighthouse only were to be erected, which should you suggest should be erected first? First, King's Island; and then, next, Cape Schanck. I think King's Island is the most important.
349. Have you ever considered whether there would be any necessity for a light on the southern part of Tasmania? I do not consider myself competent to give an opinion, not knowing enough of that coast.
350. Have you any further suggestions to make affecting the question under the consideration of this Commission? I would suggest that no time should be lost in getting a light on King's Island, and next to that, on Cape Schanck. I consider that those are the two most important, and I think they ought to be commenced as soon as possible, for the benefit of trade as well as for the safety of life and the prevention of wrecks.
351. Is the current in Bass's Straits, according to your experience, local with regard to the wind, or does it set in any particular direction constantly? I am not at present prepared to say, without referring to the log. I have found different currents, but never had a proper opportunity of testing them. [*The Witness withdrew.*]
- Adjourned to to-morrow, at ten o'clock.

WEDNESDAY, 6 AUGUST, 1856.

**Present:—**

MR. CHAMP IN THE CHAIR.

MR. BROWNE,

CAPTAIN KAY, R.N.

Arthur Devlin, Esq., examined:—

- A. Devlin, Esq. 352. Have you followed the occupation of master mariner for a great number of years? Yes.
353. Have you commanded vessels out of the Port of Sydney and the adjacent Colonies? Yes, for about seventeen years.
- 6 Aug., 1856. 354. At present you are engaged in mercantile operations? I am at present, and have been for the last five years.
355. What trade have you been principally employed in? The inter-colonial trade principally, and I have been to China and India occasionally, and the west coast of America and to the Mauritius. 356.



356. Would you specify the Colonies to which you have traded? South Australia, Van Diemen's Land, New Zealand, Port Phillip, Sydney and Moreton Bay.
357. Then you have had good opportunities of ascertaining the nature of the navigation of both the coasts of Australia and Bass's Straits? I have so.
358. Have you ever traded to the northward of Sydney? I have traded to the northward, to Moreton Bay occasionally, and through Torres Straits.
359. In trading to the northward of Sydney have you found any deficiency in the coast, or any part that required, in your opinion, to be lighted between Sydney and Moreton Bay. Are you aware that a light is now being erected at Moreton Island? Yes; that is necessary.
360. Is there any other point on which you think a light should be erected? Point Stephens, perhaps.
361. Would not that be for a harbour light? Yes. I do not see any actual necessity for it unless for a beacon for the harbour.
362. For vessels proceeding through Torres Straits do you think any other light besides that at Moreton Bay should be erected between Sydney and Moreton Bay? Certainly not.
363. That would be a sufficient light to enable a vessel to take her departure to Torres Straits? Yes, if she had a wish to sight that part of the coast, which I do not think would be necessary.
364. In trading to the southward of Sydney have you found any portion of the coast between Sydney and Cape Howe which, in your opinion, requires to be lighted? Cape St. George would be the only point I should care about lighting.
365. That you are of opinion should be lighted? I think so.
366. Have you ever found yourself embayed on that part of the coast? I have, sometimes.
367. On which point would you consider it advisable to place a light? I should place a light on Cape George, on the southern promontory.
368. Do you think that would be seen by vessels coming from the northward? Yes, it would be seen over the land by vessels in the vicinity of Shoalhaven.
369. With the exception of Cape George is there any other point between that and the Howe which you would consider should be lighted? I do not see any need for it.
370. You think that Point Perpendicular is not too high to prevent a vessel seeing a light on Cape George? Certainly not, if the lighthouse is erected the ordinary height; the land thereabouts is some thirty or fifty feet higher than Point Perpendicular. It seems, in my opinion, necessary to erect a light on Cape George. In shaping a course from Montague Island, I have found it necessary to shape it a point outside the proper one to counteract the indraught. On several occasions I have found my vessel set in a point.
371. Are you aware that some vessels have been lost through that? I may mention the "Hive" and two or three others which were lost in Wreck Bay for want of a light.
372. You think the indentation shewn on the chart is not so great as the tend of the land? No, the chart is not accurate, the indent is greater.
373. You think if a good lighthouse were erected on Cape George the navigation from Cape Howe to Sydney would be very much improved? Yes, and the lights would be abundant.
374. Have you been in command of a vessel since the Gabo Island light has been in existence? No.
375. Do you approve of the position of it? I think it is in an excellent position.
376. In proceeding from Gabo Island, making Bass's Straits from the eastward, where would next be desirable to improve the navigation in the way of lights? Wilson's Promontory, which would show ships from either the eastward or the westward their position.
377. It has been suggested in evidence that a powerful light on Wilson's Promontory might have a tendency to put a ship in such a position as to hamper her on the Ninety-mile Beach when coming from the south-east; do you think that would be likely to be the case? There is more in imagination as to the Ninety-mile Beach than in real danger, I think.
378. If vessels were to look for a light on Kent's Group it has been supposed that it would be safer than if they looked for a light on the promontory? That might be the case.
379. But still you think a light would be beneficial generally? A light would be better, if possible, on the Rodondo.
380. Have you ever landed on the Rodondo? No. I have passed very close to it, and it seemed to be one of those places which it was almost impossible to climb up by any chance.
381. Stokes in his chart places the Rodondo 1,130 feet high, would not that be an insuperable objection to the erection of a lighthouse there? It would.
382. Are you acquainted with the peculiarities of the Ten-foot Rock? I have never landed on it, but I fancy there would not be base enough for a lighthouse there, and a lighthouse would have to be some five or six hundred feet high to show it over the Glennies.
383. You consider a light in the neighbourhood of Wilson's Promontory, wherever it would be most practicable to erect it, would be of great advantage? Yes, very great indeed.
384. In coasting vessels or traders working round from Sydney to Melbourne, which course do they usually take in passing the promontory; do they pass between the Rodondo and the main land, or do they keep to the southward of the Rodondo? They invariably pass between the Rodondo and the mainland.
385. Is that considered the safest passage? Yes; they more particularly shape that course to avoid the Crocodile.
386. Is there any other place further on towards Port Phillip which, in your opinion, ought to be lighted as well as the promontory? If I had money I would light both Cape Schanck and Point Lonsdale. My reasons for that would be, that ships running down from the westward or coming from the southward—the land is very low from Cape Schanck to the White Point—or from Cape Patton to Cape Schanck, and in the night it is very difficult to observe it, and it would be very desirable to have a light on Cape Schanck and another at Point Lonsdale.

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387. A vessel standing in for Port Phillip Heads would then be able to ascertain her position by the cross bearings? Yes.
388. Of the two lights, if it were decided only to have one, which point would you think most desirable to be lighted? I would light Cape Schanck, because the present lights on Shortland's Bluff would still give a cross bearing, but it would be very desirable to have a light on Point Lonsdale, for the "Sacramento" no doubt was lost there through the shore being so very low. The state of the weather at times is such that you really cannot see Point Lonsdale.
389. Would it not occasion confusion to mariners to have lights upon Point Lonsdale and Shortland's Bluff also? Not if the lights were properly distinguished.
390. You are aware that there are two lights now on Shortland's Bluff, do not you think the erection of another light would be likely to mislead? It might for a time—it would be only for a time: a ship to the west-south-west of the entrance to Port Phillip Bay would not be able to see the Shortland's Bluff light; the light would be shut in; she would have to stand out more to the eastward before she would open the light, and I have no doubt that was the cause of the loss of the "Sacramento," which was lost on Point Lonsdale.
391. Of the two you decidedly give the preference to Cape Schanck? Most decidedly, because ships in the ordinary way would pick up that light and get their cross bearings with the Shortland's Bluff lights.
392. Would not vessels coming from the westward, not coming to the harbour of Port Phillip, after having passed the Otway, find an advantage in sighting the Schanck light, which would give them a good departure for the promontory—that is, having passed the Otway light, the Cape Schanck light would be a sufficient advantage as a headland light for vessels passing through from the westward? It would be of service, but not at all times, because if they did not pick up Cape Otway they would hardly pick up Cape Schanck light.
393. Was the lighthouse on Kent's Group in existence when you commanded a ship? It was.
394. Do you consider that an available position for vessels coming in to the straits from the eastward? I do; it is rather high, but of course that is necessary.
395. Is it not necessary to have it high, to be seen from all points of the compass? It is quite necessary that it should be so. It is a very good light. Occasionally it is enveloped in mist and fog, but that would be the case with any light.
396. Vessels coming from the eastward can make that light without any fear of consequences? Most decidedly.
397. Have you ever traded to South Australia from here? Yes, for some years.
398. What may be your impression of the lighting of that coast after passing Cape Otway? I should say Cape Northumberland would be the best point to light.
399. Would that be extremely useful to the Adelaide trade? Yes.
400. Some gentlemen we have examined have expressed an opinion that Cape Nelson would be a good position for a first-class light, or Cape Bridgewater? It would be very desirable to have a light there no doubt.
401. Do you think that a light on Cape Nelson would be a light that a vessel coming from the westward would be inclined to make, seeing that they have also a good light on Cape Otway? No; I would not do it; I do not think it desirable. A ship going in to make that light would run out of her parallel; no prudent mariner would attempt to make that light while a light exists at Cape Otway. There's a great deal of heavy swell, and with the wind at south-west of course it would be the height of imprudence to run to the northward, and with the wind from the north-west it would be a fair wind to run down to the Otway.
402. Then you think Cape Northumberland would be the only point on that coast at which it would be necessary to place a leading light? Yes; that would be the point of departure for ships from Adelaide shaping their course in coming to Port Phillip or through the straits.
403. Have you ever had an opportunity of making King's Island on your passages at any time? Many times. I have anchored frequently on the east side of it, and have been beating about all parts of it.
404. The east side of it is Seal Elephants Bay? Yes.
405. Have you had an opportunity of making the land in all weathers? I may say in all weathers. I have circumnavigated it as much as three or four times in one voyage trying to get to South Australia.
406. There is an impression abroad that a light, if erected on that island, would, from the frequent hazy state of the weather in the vicinity of it, be to a certain extent valueless, and liable to lead a vessel into danger instead of out of danger,—what is your opinion as to that? No prudent mariner would go there from choice, but ships are frequently, in running down from the westward, much further to the southward than they expect. They may not have had observations for a few days previously. In my own case on three occasions I found myself south of the New Year Islands when I considered myself some twelve or fifteen miles off Cape Otway; and on one occasion I should have been wrecked but for having a very smart man-of-war brig under me I was enabled to carry a press of sail and get her off the coast. There was a sandy beach which showed me that I was off King's Island, close on a lee shore.
407. In either of those cases would a light upon the northern point of King's Island have given you any warning of your position? I would erect a light upon the New Year Islands if at all, from the fact of its being the extreme western land and to the westward of all dangers.
408. How would a light upon the New Year Islands apply to a vessel running in gale of wind and making the light on that island,—would she not then be in a difficult position to enable her to pass the Harbingers on the north part of the island if a vessel were to make the New Year Islands? She would have the wind quarterly at north-east.
409. Then your idea is that the New Year Islands would be a better position for a light than the northern extremity of King's Island? Yes, for warning ships. One of my reasons for having

- having a light on the New Year Islands would be this, that a ship so far to the southward of her position embayed would see a light, whereas she would be prohibited from seeing a light on the north of King's Island. A. Devlin,  
Esq.
410. It has been given in evidence that a light on the northern point of King's Island could be seen over the New Year Islands, unless you were very close in to the shore? That is quite true; but ships, unfortunately, get close in very frequently. Aug., 1856.
411. What is your opinion as to any light being there at all—do you think that for prudent navigation it would be better to leave the light on Cape Otway, lighting the northern side of the straits, and leaving the southern side unlighted? I certainly would have a light on the New Year Islands, to show danger.
412. You think it would be desirable to light the southern entrance to the straits? Yes, to shew danger. Ships would never border on that coast unless they were driven there. No ships would make that part of the coast from choice, I am quite certain of that.
413. Then you think a light would not be calculated to lead a ship into danger by inducing her to hang to the southward for the purpose of making the light, and thereby being in a position where she might get on the Harbinger Reef, but you think on the contrary that it would warn vessels of their danger when they were there under circumstances which they could not control? That is my opinion.
414. If it should be decided that only one light should be erected of all the lights you have pointed out as being necessary, which light would be the first you would consider it the duty of the Government to erect? I would erect one in the first instance on Cape Northumberland.
415. Are you speaking now merely with reference to vessels coming from the westward, or taking the inter-colonial trade into consideration? More particularly for the inter-colonial trade, but ships coming from the westward would occasionally get down into that position.
416. What use would a light at Cape Northumberland be to vessels going between Sydney and Melbourne? I was speaking as to the trade to Adelaide.
417. The question was generally, which lighthouse of all you have described as being necessary to be erected, would be the most necessary for the interests of the general trade of the colonies? I would have one on Cape Schanck, because the great trade is to Port Phillip at present, and it is necessary to show ships in there beyond all other places, seeing that the great trade is there at present.
418. The light on Cape Schanck would be equally serviceable to the trade from Van Diemen's Land, New South Wales, and South Australia? Yes, from all parts.
419. Then you think that that is the first lighthouse that ought to be erected, and that that ought to take precedence of Wilson's Promontory and King's Island? Most decidedly, for it would be useful for all ships coming to Port Phillip from all parts of the world.
420. Would it be of any use to vessels bound from the westward to New South Wales? It would while running down in the parallel of Cape Otway, about 39°. Ships from England having picked up Cape Otway light would have an excellent departure, but occasionally they get very strong north-easterly and south-easterly winds which are very baffling, and then a light on Cape Schanck would be of great use.
421. Next to that, which do you think it would be most advisable to erect? I think the Cape Northumberland light.
422. In preference to Wilson's Promontory? It is only for the steamers, and in very thick weather, that a light at Wilson's Promontory is necessary.
423. You think the promontory light would be more useful for steamers than for any other class of vessels? Yes; and there is the less danger for steamers, from the fact of their being able to go away in a moment. The large ships do not go down there; they shape their course in the fair way just outside Sir Roger Curtis's Island, and by Kent's Group.
424. In the present day is there not likely to be a very large and continued increasing inter-colonial trade by steam, which the light on the promontory would much facilitate? A light there is very desirable.
425. Where speed is an object would not a leading light of that kind be a considerable advantage? Doubtless it would be desirable, but it is not absolutely necessary.
426. And you think the King's Island light is a matter which may stand over for a time? I think so. We always avoid King's Island for fear of accident. A ship beating about in very fine weather would border over, and very probably sight the island, but ships running with a leading fair wind pass within fifteen or twenty miles of Cape Otway.
427. Have you ever been through Banks's Straits since the lights have been there? Yes.
428. There is a light on Goose Island and a light on Swan Island; are those lights quite sufficient in your opinion? It always occurred to me that they were very good lights indeed. I think I have passed through three times since they have been erected.
429. Do you know the south coast of Van Diemen's Land? I know it, but I have not coasted there much about. I have passed to the southward, making the voyage from Hobart Town to South Australia.
430. Which way did you go round? Round Somer's Cape.
431. Then you have seen the light on Bruné Island? Yes.
432. Is that the general way? No; I had rather a large ship, and I preferred that way. I wanted to avoid Banks's Straits.
433. Then you are hardly in a position to give any opinion as to any additional lights being required on the south coast of Tasmania? No, I have not been a sufficient coaster thereabouts and the south coast, to say.
434. Have you any further suggestions to offer to the Commission with reference to the subject under consideration by them? I think not.
435. You stated in a former part of your evidence that you were distinctly of opinion that a light on Point Lonsdale would be very useful? Yes; I think a ship to the west-south-west of the light would shut in the present light.

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436. A light there would not be of any service to the trade coming from the eastward, because it would be hidden by Cape Schanck? It is not necessary for ships coming from the eastward, or from Van Diemen's Land.
437. Then a light there would merely be a harbour light to guide ships into the harbour? In a gale of wind it would indicate the low shore there is there; and it would be a very cross bearing for ships making the harbour, but it is not absolutely necessary, in my opinion.
438. Supposing it were decided that only one light should be put up, you give the preference to Cape Schanck? Most decidedly.
439. You consider that a light on Cape Schanck is almost indispensably necessary? I think so, most decidedly.
440. And that is the only light that you consider to be really indispensably necessary for the general inter-colonial trade? I think Cape Schanck, number one, and Cape Northumberland, number two.
441. Cape Schank would be advantageous for vessels coming from England, China, and from South Australia? Yes.
442. A light on Cape Northumberland would only be valuable for the trade of South Australia and Port Phillip? Exactly.
443. You would not look upon that as a high road light? No; it is a matter for South Australia and Port Phillip.
444. Would you consider Wilson's Promontory as a highway light? It would be well to have a light there, but it is only for steamers and small ships which really know the coast well—large ships in running through invariably bear more out to sea and take Kent's Group light, and if a light were at the promontory I do not think they would use it.
445. A light there would be of no use to vessels coming from Van Diemen's Land? It would be of use, because it would show ships their position, and they may have shot very much further to the northward than they expect, in thick weather.
446. How far is the light on Kent's Group visible? I have seen it forty-eight miles. It is quite fresh in my memory that I took the cross bearings of the Rodondo and the Kent's Group light, and I was forty-eight miles from the light on Kent's Group. That was in very fine weather.
447. Taking it somewhere about Curtis's Island? I have no doubt in very clear weather it might be seen from Wilson's Promontory.
448. You do not consider a light at Wilson's Promontory to be indispensably necessary? I do not.
449. Vessels coming at present from the westward generally keep this shore for the purpose of making the Otway light, do not they? Yes.
450. And you do not think it necessary that there should be a light on King's Island? I do not think it absolutely necessary; it would be desirable.
451. You do not think it indispensably necessary? I scarcely would say that. I should like a light on the New Year Islands to warn ships of danger.
452. Then do you think it desirable? I would have a light on the New Year Islands.
453. You think that would be the most preferable site? Yes, to the westward of all the dangers. Supposing a ship ran down and got the light to bear north of her, she would be able to clear the land, and it would show her position; or supposing she was running down and saw the light suddenly three miles off, she would be able to clear the Harbingers.
454. No vessel would go into that position intentionally to make the light? Certainly not; they would always try to make Cape Otway. All prudent mariners would keep clear of King's Island.
455. Would a ship in thick weather, that found herself very close to the north point of King's Island, be able to see a light on the New Year Islands? Oh yes.
456. It is seven miles? Yes.
457. A ship in that case might very easily be in a very awkward position with respect to the Harbinger Rocks and yet not be able to see a light on the New Year Islands? A ship running down between the Harbingers and the New Year Islands would see the New Year Islands light, and getting a bearing she would be able to get clear of the Harbingers.
458. A ship running with a gale at north-west would not have a chance to haul up north-east? Having a light there in an extreme case—supposing the case of a ship being there with a north-west wind—as a last resource she might run under the lee of the New Year Islands and anchor, and so be saved.
459. Have you ever anchored in the Franklin Roads? No; I have not anchored there.
460. The only object in your opinion for a light on King's Island or the New Year Islands is with a view to assist a ship into a safe anchorage, and warning her if she happens by chance to get down to the southward out of her course? Yes.
461. As a warning light for the straits you think it would be of no use? Certainly not. A ship on the south-west side of King's Island would be able to see a light on the New Year Islands, but she would not be able to see a light on the northern extremity of King's Island. I wish it to be understood that a light on the New Year Islands I would only have to warn ships of dangers, not for ships to run for; it is always a dangerous part for ships to run to.
462. You think a light on King's Island might be advantageous in saving a ship by enabling her to get into safety or haul off the land? Yes.
463. Do you think there is a set to the southward in that part of the straits? Yes, for the last eighty or ninety miles there is. The ebb and flow of the tide in the straits is about north-east and south-west.
464. You think a light on the upper end of King's Island might lead a vessel into danger? Yes; because you may not see it more than three or four miles, and then you would be in the midst of danger, but if you saw a light on the New Year Islands three or four miles off you would avoid the danger.
465. A light on King's Island is not required then for the navigation of the straits? It would not be actually necessary.
- 466.

466. At present vessels generally keep to the northward, with a view of picking up Cape Otway light? Yes. A. Devlin,  
Esq.
467. If a light were placed any where on King's Island, might not vessels be induced to calculate upon seeing that light and keep further to the southward than they do at present? In fine weather they might. 6 Aug., 1856.
468. Then do you not think that a light on the north end of King's Island would really be dangerous, as vessels might get so far down as not to see the light? I have always thought it would be dangerous.
469. But that danger would not arise if the light were on the New Year Islands? It would not be so dangerous. I have always considered it would be dangerous to have a light on the north end of King's Island. If there is to be a light erected I would erect it on the New Year Islands. A light on the New Year Islands would have saved most of the vessels that have been lost.
470. You are clearly of opinion, on the whole, that if there is to be a light there at all the New Year Islands is the best place for it? Most decidedly.
471. Then you think on the whole it would be more desirable that there should be a light on the New Year Islands, and that it would be beneficial rather than injurious to the general navigation? Yes, I think it would. The advantage of a light on the New Year Islands would be to give a ship earlier warning of her having King's Island under her lee, and consequently giving her more time to get off. [*The witness withdrew.*]

Mr. Hugh Macmeiken examined:—

472. What is your occupation at present? I am living on shore at present. I have been at sea a good many years. Mr. H.  
Macmeiken.
473. Have you been engaged in the inter-colonial trade? I have been backwards and forwards home several times, and commanded the "Havilah." 6 Aug., 1856.
474. Are you familiar with the coast between Cape Howe and Port Jackson Heads? I have been betwixt Port Phillip and Sydney several times.
475. Do you think anything is wanted besides the Gabo Island light between Port Phillip and Sydney Heads? I have generally been going in a large vessel, and have kept pretty clear of the land. I would rather not express an opinion upon that point. My experience of the eastern coast is not sufficient to justify me in offering an opinion upon the matter.
476. Your information is principally confined to the navigation of the straits? Yes.
477. In coming from the eastward, on entering the straits are there any points which appear to you necessary to be lighted, coming either from Tasmania, New Zealand, or New South Wales? For steamers, I should say a light on Wilson's Promontory would be very necessary, but for sailing vessels I think the light on Kent's Group is sufficient.
478. What distance have you seen the Kent's Group light? I should say from thirty to forty miles off.
479. Then any prudent mariner entering Bass's Straits from the eastward would try to make the Kent's Group light, and go through that passage? Yes.
480. Even if there were a light on Wilson's Promontory, do you think a prudent mariner would be inclined to hug the promontory? Even if he did, I think he would see the Kent's Group light, unless he was too close to the promontory.
481. Coming in the opposite direction from the westward—does the same rule apply as to the advantage of the Kent's Group light over any other for large ships? If there was a light on Wilson's Promontory you would see that first.
482. But do you think that absolutely necessary? It is bold land off there—you would generally see it going along the coast. I think a light on the Schanck would be desirable for vessels coming both from the eastward and the westward. Then a vessel coming from the westward, if there were a light upon the Schanck, would come more to the eastward, and be sure of making one of the lights, and get a cross bearing of the Schanck before she bore in for the Shortland's Bluff lights; whereas, now, if you keep a little too far in you shut in the present light at the heads entirely.
483. That is if you stand too much to the northward? Yes, if you are a very little inside your course you would shut out the light.
484. Then you think the Schanck light would be an important light, both for vessels from the eastward and the westward? Yes.
485. And whether coming from Van Diemen's Land, New South Wales, or South Australia? Yes, I think it would.
486. Would it be of any use as a great highway light to vessels coming from the westward, bound through the straits to New South Wales or Launceston? Supposing a vessel had got into the straits with a heavy southerly gale, they might be driven to leeward, and then this light would be a good turning light. And another thing is, if they found they had no chance of weathering the gale they might run for Port Phillip Heads, and it would even guide vessels to Western Port as a harbour of refuge.
487. You think a light on Cape Schanck would be beneficial to all inter-colonial navigation, and would be of some advantage to over-sea navigation? Yes, I think there is every chance of its being useful to vessels bound through the straits, especially in southerly gales.
488. Would it be more useful than the promontory light? The promontory light would not be so useful generally as a light on the Schanck. It would be useful to vessels which cut the corners off, if we may so express it.
489. There is no light on Point Lonsdale at present? No.
490. Would you advise a light being placed there, supposing one is also placed on Cape Schanck? I do not think it is requisite, with the lights we have got, if there were a light on Cape Schanck.

- Mr. H. Maemeken.  
6 Aug. 1856.
491. Would not an additional light be more likely to lead to confusion than to good? I do not think it is possible to have a better guiding star for the heads than bringing the present two lights in one. You would still want a guiding light if you had a light at Point Lonsdale. I do not think a light on Point Nepean, and another on Point Lonsdale, and the present two lights, would be as good as a light on Cape Schanck, and the present two lights. I think nothing can beat the present arrangement of the lights at the heads for making the port.
492. Taking a ship bound from Port Phillip to the westward there is nothing wanted in the way of lights before you get to Cape Otway? No.
493. Then going on to Adelaide is there any point which wants lighting? Cape Northumberland certainly is the point on all the coast where a light is most wanted.
494. Do you think there is any necessity for a light at Cape Nelson or Cape Bridgewater? No, not the slightest; the coast is very bold there and easily seen.
495. If a light were placed on either of those capes, do you think a prudent master of a ship coming from the westward would endeavour to make that light instead of the Otway light? No; it would be going a great deal out of his way.
496. If a man attempted to make the land about Cape Nelson or Cape Bridgewater might he not be driven down upon a dead lee coast, if he had a south-westerly wind? There would be little danger of that, I think, but I can see no advantage in a light there except to make Portland.
497. That would only be a harbour light? Yes. There are two points on the western coast at which I think lights are very much wanted—Cape Northumberland and Cape Jaffa. There are several reefs there running some distance off the island, and it is a disputed point how far they run off the land; it is a very dangerous point to approach. Cape Northumberland is decidedly the point where a light ought to be placed.
498. Would not a light on Cape Northumberland and another light on the outer point of Kangaroo Island, be a sufficient leading mark for vessels bound for South Australia, if they did not go through Backstairs Passage? I do not see that a light is required on the western end of Kangaroo Island.
499. The usual course for vessels is through Backstairs Passage, is it not? Yes for vessels coming from Adelaide, and sometimes from England also.
500. There is a good light in Backstairs Passage, is there not? Yes, but I do not think it is placed in the proper position, because it is in a point which is very frequently shut out by another point. In standing down the Gulf of St. Vincent the high land of Cape Willoughby shuts the light in from view unless a vessel stands close over to Cape Jervis, which might bring her into mischief. Cape Northumberland shows by the rocks that are on it that that is a place which requires a light, and that is the most necessary light on the coast I think.
501. The advantage of a light on Cape Northumberland would be entirely confined to the trade between Adelaide and the colonies, or the over-sea trade with Adelaide alone? Vessels with easterly winds would stand in with more confidence, knowing there was a light there, and expecting to see it.
502. Generally it would be of more advantage to the inter-colonial trade than to the over-sea trade? It would be a great advantage to our overland mail steamers, if we should have them again; they would then run with confidence along the coast. The coast is now all so much alike that you can scarcely know one part of it from another part.
503. Is there any part of that coast where a lighthouse could be erected at a sufficient height to be seen a considerable distance off? Yes; there is high land not exactly at the cape, but you might pick out high land close to the point, and with a first-class light you would see it far enough off to evade the danger. I do not think the actual dangers are so far off the land as is said. I think that what has often been taken for reefs is the edge of the sea breaking the edge of the kelp, where there is seven fathom water.
504. Do you think that a light would be required at Cape Jaffa, as well as at Cape Northumberland? There is a great necessity for a light on Cape Jaffa, but I do not think it is so absolutely necessary.
505. With a light on Cape Northumberland as a leading light, a vessel might, with ordinary caution, clear Cape Jaffa? Yes.
506. The light on Cape Northumberland, you say, would be beneficial to all the navigation of the straits, except to vessels coming from the eastward? It would be useful to all vessels coming from the westward to the eastward, and to vessels bound from Sydney to India; in working up the coast, it would assist them also.
507. It would be useful to vessels going round the Leeuin from Sydney? Yes. As master of a steamer it is the point on the whole coast which I detest most. I dislike to get near it.
508. Your experience in that trade has been considerable? I have sailed the steamer for nine months myself, passing each way every fortnight.
509. That is a steamer between this and Adelaide? Yes.
510. What is your opinion with regard to a light on King's Island? My opinion is that the light ought to be at the north end of the island.
511. Do you think there ought to be a light there at all? Certainly; it would be a guide to a vessel coming in, for a vessel then need not go so near Cape Otway as they generally try to do now, for they would see the light on each side of them. I think there are places on the coast more important to be lighted than King's Island. I should say the Schanck and Point Northumberland are the most pressing.
512. Then the King's Island light you consider might be an advantage under certain circumstances, but you do not consider it absolutely necessary to secure the safe navigation of the straits? No, I do not think it is absolutely necessary; I think it would be a very great improvement if you had it.
513. Do you think it likely to draw a ship into danger? I think a vessel bound in through the straits would prefer making the Otway light to the King's Island light, but if she did get to leeward, the King's Island light would tell her how near she was to danger.

Mr. H. Macmoiken.  
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- 514. Have you been often at King's Island? I went down with Captain Ferguson, when he went down after the "Flying Arrow."
- 515. What is your opinion of the atmosphere there; is it frequently clouded? It is frequently clouded; in all my experience of going to Adelaide I have never seen King's Island.
- 516. Although you have been within what would be a visible distance of it, if it was clear? I am quite positive I have been nearer to it than Cape Otway without seeing it.
- 517. How near have you been to it without seeing it? Within fifteen miles I should say.
- 518. More than once? I have been only once or twice in that predicament going out with westerly gales.
- 519. Your impression is that the light would be very frequently obscured and valueless in consequence of the haze that hangs about the island? Yes, I think it would.
- 520. Under such circumstances would not a vessel be liable to be down on the Harbinger Rocks before she saw the light at all? It is possible she might.
- 521. Do you think you have ever been within ten miles of the island and not been able to see it? When we went down to bring those people up we were closer than ten miles and could not see it in fine weather.
- 522. What class of weather was it—do you remember how the wind was? The wind was from the south-east I think.
- 523. Would you put a light on King's Island or not, if it was in your power to do so? I think there are many other lights much more wanted.
- 524. Might not a light on King's Island be prejudicial instead of beneficial, many people think it would; what is your opinion on that point? I think a light is scarcely necessary on King's Island with the light we have got at Cape Otway.
- 525. It is not wanted as a guide—that is agreed upon all hands; but do you think it is wanted as a beacon? I think it might lead strangers into danger, knowing there was a light there they might try to make it.
- 526. Is it not contrary to all principles of navigation to light inside a danger, that is, to light on an island inside a reef running out from it? A great many lights are to point out reefs running outside.
- 527. Is not it always advisable that a light should be placed, if possible, so as to show the boundary of the reef? It is so; but you could not put a light on the Harbinger Rocks; it is just a wash.
- 528. Would a light on the New Year Islands be serviceable? I do not think you would see a light there so well as one on the main land.
- 529. Are the New Year Islands as liable to be obscured as King's Island? When we went down to pick up the passengers of the "Flying Arrow" it was a beautiful morning, and until we got close to the New Year Islands we could see neither King's Island or the New Year Islands; we must have been south of Cape Wickham before we saw the land. It was covered with fog.
- 530. Was it that description of fog which usually obscures high land, or merely a haziness produced by the state of the weather? I think it is a haziness produced by the state of the atmosphere.
- 531. And generally hanging about that land? Yes.
- 532. Had you seen it clouded on previous occasions when you had been within so short a distance? I never was so close to it before.
- 533. In standing across with a north-west wind would a light upon that island be any advantage to you? Would you stand over to sight the light if you had the ordinary weather, you meet with about there, or would you stand over, as you do now, and go about when you thought you had gone far enough southwards? I should never go down there to sight the light.
- 534. The light would be no assistance to you in standing over? It might be, for there might be a current setting through the straits which I was not aware of, and the light would be a warning to me.
- 535. There is no very great current setting down there, is there? Yes, I have always found a current setting through, according to the wind.
- 536. Have you found any particular southerly set down upon the island? No, I cannot say. I have ever remarked it.
- 537. It has usually been either east or west? Yes, through the straits.
- 538. Do you know which way the current draws generally? It depends a good deal upon the wind.
- 539. Have you been to Launceston or any part of Van Diemen's Land from this colony? Yes.
- 540. Have you passed through Banks's Straits? Yes, we have done so.
- 541. Will you give the Commission your opinion as to whether you consider those straits sufficiently lighted or not? I should think they are. There are some excellent lights on them.
- 542. Would you give the preference to a light on the northern end of King's Island over a light at the New Year Islands? Yes; and the reason why I say so is that it is nearer to the danger, and it is the nearest point to the opposite light.
- 543. As a warning beacon it is not required as much down to the south-west of the island as on the north. Would not a light on the New Year Islands have been more useful in the generality of cases of wrecks, and quite as useful in all the cases of wrecks as if it had been on the north of King's Island? The higher altitude of the light on the north end of King's Island would render it as likely to be seen as a light on the New Year Islands.
- 544. But it is not proposed in the report to the Government to put it on the highest point of the island, but at a lower point? I think it should be placed at the highest point of the island.

- Mr. H. Macneiken. 545. Your opinion is, that if Cape Northumberland and Cape Schanck were lighted, more substantial benefit would be done to the shipping generally navigating the straits, than if a lighthouse were erected on King's Island? I think so, decidedly.
- 6 Aug., 1856. 546. Are there any further suggestions that you would wish to offer to the Commission on points on which you have not been asked any questions? I think not. A light at Cape Jaffa is wanted; but I think we may do without it for some time, until we are better able to afford it.
547. Do you pay light dues now in going to South Australia? Yes; very heavy ones to South Australia. The port dues are very heavy compared to Melbourne. They make us pay the same dues as a foreign vessel.
548. Is it a good light upon the Trowbridge now? Yes.
549. That has been recently erected, has it not? Yes. [*The Witness withdrew.*]

Captain Robert Troop Moodie examined:—

- Captain R. T. Moodie. 550. You command the steamer "City of Sydney"? Yes.
- 6 Aug., 1856. 551. And have commanded her for some years? Two years and a half.
552. During that time what trade has she been principally employed in? Exclusively between Melbourne and Sydney.
553. Then you have had ample opportunities of studying the present state of the navigation of the straits, and also of the coast of Australia? Yes.
554. Will you inform the Commission whether, in your opinion, any additional light is wanted between Cape Howe and Sydney Heads, and if so, where it should be erected? One at George's Head and one at Twofold Bay would be of great service.
555. Do you consider that Cape George is a necessary point on which a light should be erected? Yes.
556. Would you put it on Cape George or Cape Perpendicular? On St. George's Head, to keep clear of Wreck Bay.
557. Do you think that would be sufficiently high to be seen over Cape Perpendicular in coming from the northward? It is going to the northward that the danger is—not so much coming to the southward.
558. You think a light is more an object in standing to the northward than in coming to southward? Yes.
559. Have you found any particular indraught on that coast? Yes, very often; in the steamer the courses are steered very correctly, and I have several times found myself in Wreck Bay, and have had to haul out.
560. And that in thick weather might lead you into mischief? Yes; in thick weather we give the ship the benefit of a point or two until we pass there; but even in fine weather we have had to haul out.
561. When you have steered only what you have considered a proper course from Montague Island up? Yes.
562. You think that a light would be beneficial also at the entrance of Twofold Bay? Yes.
563. That would be more for a harbour light for vessels running in for shelter? Yes, without this guide they might be driven back as far as the Dromedary.
564. That, if established, would be purely a local light and not a highway light? Yes, because vessels from England have no business near it.
565. A light at Cape George would be a high road light? Yes; it would be useful for all vessels on the east coast, whether bound through the straits or round Van Diemen's Land.
566. After visiting the Howe are there any points on the coast of Victoria which appear to you to be dangerous in their present state? Not until you get down to the promontory.
567. Do you consider that it would be advisable to put a light on the promontory? You would want two.
568. Where would you put them? One on the southernmost Sea Island, and the other on the island adjoining the Cleft Island; it is impracticable to put it on the Cleft Island, and I would put it on the southernmost of the Glennies, adjoining Cleft Island.
569. Would not a light on the promontory answer the purpose of both these? On the point of the promontory the land is so high that you would seldom be able to see a light there.
570. It would not answer the purpose then? No.
571. A light on the Glennies would be useful for all vessels coming from the westward? Yes.
572. If one of the two only were to be erected, which would be the most useful for the navigation both ways? One on Cleft Island would be of no service coming down from the north-east; because we do not see it until we are close up to the promontory.
573. You think if there were a light on the southernmost of the Sea Islands, and one on the southernmost of the Glennies, the passage round the promontory would be then clearly pointed out? Yes, and it would be a great benefit to Port Albert.
574. A sailing ship bound to Melbourne would have no business there? No; a sailing ship would always keep the Kent's Group, because the winds are so very variable in the vicinity of the promontory.
575. Then those lights are more necessary for the communication by steam? Yes.
576. Sailing vessels would generally use the Kent's Group light and would keep more to the south of the promontory? Yes; a light there would always be a guide to them, and then with a leading wind they could take the passage between the Rodondo and the Crocodile. They seldom take the passage between the Rodondo and the promontory with a ship under sail.
577. Do you know the Rodondo? Yes.
578. It is stated in Stokes's chart to be 1,130 feet high? Yes, it is very high.



579. Would it be possible to put a lighthouse there? It would be of no use when it was there. You can never see the top except in very clear weather. Captain R. T. Moodie.
580. Do you know the Ten-foot Rock? Yes.
581. Would it be possible to put a lighthouse there? It might be possible, but the engineering difficulties would be very great. You could not work more than two or three days a week, and then it might all be washed down before you got any more up, and a lighthouse there would have to be an immense height to be of any service even if you could put it there. The only advantage of a lighthouse on that rock would be, that you could see it from both sides; but before you could get it high enough you would have to go 200 feet high.
582. If the engineering difficulties could be overcome, do you think that would be the best position for a lighthouse? Provided it could be built high enough to be seen in reasonable weather two or three miles to the eastward of the Seal Rocks; but that would be twenty miles distant, and that would require an immense height.
583. If the light were actually on the promontory would it be of any benefit whatever? It would be of benefit coming down from the north-east, but then it is eighteen miles off the Seal Rocks.
584. It would be perfectly useless to ships coming from the westward? Yes.
585. Is there any point westward of the promontory where a lighthouse could be put? Then it would be no good to ships coming from the eastward—it would be shut in by the high land.
586. Is there any position on Wilson's Promontory on which a lighthouse could be erected which would serve for the trade both ways? No.
587. The only effectual way of lighting it would be by having a light at both sides? That is the only effectual way in my opinion, and I know of no place in the world where lights are more required than they are there.
588. That is for the Colonial trade between here and Sydney? Yes; or for the ocean steamers, if ever they run again. The mail steamers all take this route.
589. Would not a light on the southern Glennie be also of considerable use to a vessel bound to Launceston? No doubt of it, and especially to a vessel bound to Hobart Town, because in blowing weather from the north-east they hug the land all along. Captain Bentley told me that with an easterly gale he kept close in along the land, and then stood across from Rodondo to Curtis' Island.
590. In such a case as that, what would have been the use of a light to him if he could see the land all the way? In the night time you might not be able to see the land a couple of miles off, when you could see a light twelve miles off.
591. He would not have taken that course except that the wind was easterly? Yes, and he took advantage of the lee which he possessed all the way round to Rodondo.
592. To a vessel with a fair wind running down, would not the light be a considerable advantage as a leading light? It would not be absolutely necessary as a warning, because he would have so much sea room.
593. Then those lights are really only necessary in making rapid passages by steam where you wished to take the most direct route probable? Yes, and to lessen the danger, sailing vessels generally try to keep away from the land and we try to hug it.
594. Do you think it absolutely necessary that a light should be put on the promontory for the sake of the Van Diemen's Land trade? Certainly not.
595. Proceeding from Wilson's Promontory towards Melbourne, is there any point between the promontory and Shortland's Bluff which you consider ought to be lighted? The Schanck, unquestionably, for all parties.
596. Would a light on the Schanck be beneficial to vessels entering the straits, bound to all portions of the Australian Colonies? I think not to vessels going right through.
597. It would be beneficial to the Tasmanian trade, would it not? Yes.
598. And it is indispensably necessary to all vessels coming from the eastward? Yes.
599. And to some extent to vessels coming from the westward? Yes.
600. And to all vessels approaching Port Phillip Heads, from wherever they come? Yes.
601. Do you think a light on Point Lonsdale is necessary as well as a light at the Schanck? No; it can be no guide in coming to Port Phillip, because if we could see the Lonsdale light we should see the Shortland's Bluff lights.
602. It has been stated that a vessel might be in such a position as not to see the Shortland's Bluff lights, and a light at Point Lonsdale would be useful? A light on Lonsdale point would be of service then. It is quite possible to shut the Shortland's Bluff lights out. I have always approached under steam, and come the other way; so that I cannot speak so well as to that; but having a light on the Schanck, there can be no reason whatever for having one on Point Lonsdale, because if you did not see the Shortland's Bluff lights you would only have to borrow a little more to the eastward, until you did see them.
603. And there would be less danger in borrowing to the eastward if there were a light on Cape Schanck? Yes.
604. The cross bearing from the Schanck and Shortland's Bluff would render it perfectly easy for any vessel to approach the heads? Yes.
605. Do you think the light on Cape Otway well placed and everything that could be desired? Yes.
606. Are you acquainted with the navigation to the westward, going up towards Adelaide? I have made several voyages from England to those Colonies.
607. Do you think any points there want lighting? Cape Northumberland, and either Cape Bridgewater or Cape Nelson. Running down here in the winter time you very often get no observations.
608. There being a light at Cape Otway, you think it would be still beneficial to light Cape Northumberland? Yes; I have known a vessel that was actually found by one of the

Captain R. T. Sydney steamers running into the bay to the westward of Cape Liptrap, the captain believing that he was not round the Otway.

Moodie.

609. Do you think if he had had an opportunity of making the land further to the westward he would have known where he was? Yes; because there is a very bold coast there.

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610. Have you had any experience with reference to sighting King's Island? I never went near King's Island at all; I always hauled in and made the land about Cape Otway.

611. From your experience as a master mariner, would you give your opinion as to the advisability or the contrary of putting a light in the neighbourhood of the north end of King's Island; that is, whether such a light would be beneficial to the shipping, or would be likely to lead more to mischief than to good? I think it would lead more to mischief. By having those two lights—one at Cape Northumberland and one at Cape Nelson or Cape Bridgewater—there can be no difficulty, and I would always recommend a ship to keep the Australian sea-board. I should strongly recommend all parties coming out here to ascertain their position some time during the day. You have 200 miles of coast, and during the day-time you can always run in and see where you are.

612. You think that a light at King's Island would induce vessels to run when they would not run under the present circumstances? Yes.

613. And the lights might possibly be obscured, and might lead them into danger? Yes.

614. Whereas, if they adopted the course they now do, of avoiding King's Island and keeping the main land they would, with the assistance of those additional lights already spoken of, be in a much safer position than they would be in with any light on King's Island? Much more.

615. Take the case of a ship beating to the westward from Bass's Straits going out between King's Island and Cape Otway, is there no other circumstance, under which a light on King's Island would be an advantage to a ship then? Coming from the eastward you know where you are—you know your position to a mile.

616. By what means? Because you are surrounded by land, and you have your reckoning.

617. Ships might be very much thrown out with respect to King's Island, knowing it was somewhere near them; do you think then a light would be of any service? No; because leading from the eastward you know your position so thoroughly, whereas coming from the westward you do not.

618. Do you think a vessel working through and standing on the southward tack would be just as cautious if there were a light on King's Island as now when there is no light at all? No; beating through from here they might get under the lee of King's Island, and having a light on the extremity of it would be a guide to them.

619. Then a light there would be an advantage to afford a good lead into smooth water and shelter? Yes.

620. Do you conceive that to be the only advantage to be gained by that light? Yes; I have never wished to see King's Island in coming from the westward at all.

621. Will you give a decided opinion whether or not you would recommend a light to be placed on King's Island? If two lights were put to the westward, that is, one either at Cape Bridgewater or Cape Nelson, and one at Cape Northumberland, good first-class lights, I should say a light would not be required at King's Island.

622. Are you acquainted with the set of the current between Cape Otway and King's Island at all? I am not.

623. Do you know the nature of the anchorage at the New Year Islands? No; I have never seen King's Island.

624. You consider that a light there would lead a ship into danger? I think it would.

625. Has it not generally happened that the vessels which have been wrecked upon King's Island, in the majority of cases, have been vessels proceeding to the westward? I am not aware.

626. If such be the case, does not it show that a light on the northern extremity of King's Island would have been beneficial to a ship that was working out between that and Cape Otway? A ship could hardly make so great a mistake as to get upon King's Island when she could hardly be twenty-four hours out of sight of land.

627. Are you acquainted with Banks's Straits? No.

628. Or the south coast of Tasmania? No.

629. Have you any further suggestions to offer to the Commission on the points on which you have been examined? No; I think the evidence I have given embraces everything.

630. Your recommendations are, that there should be a light on Cape George, two lights in the neighbourhood of the promontory, a light on the Schanck, a light on Cape Northumberland, and a light on Cape Bridgewater, or Cape Nelson? Yes.

631. Which would you think should be carried out first? Perhaps it would be considered selfish to say the promontory, but I know of no place in the world that requires lighting more than that does. Cape Schanck would be of great benefit too, but still not so much as the promontory; it is not so urgent, in my opinion.

632. That is for the steamers? Yes; and there is a larger amount of steam traffic than sailing ships between here and Sydney.

633. Have you seen the Gabo Island Light? Yes.

634. What quality light is it? I have seen it fifteen miles off. It is not a very good class light; it is not to be compared with Kent's Group.

635. If there were a greater elevation given to it would it be an improvement? Decidedly.

[The Witness withdrew.]

Adjourned to to-morrow, at ten o'clock.

THURSDAY, 7 AUGUST, 1856.

Present:—

MR. CHAMP IN THE CHAIR.

MR. BROWNE. CAPT. KAY, R.N.

Captain John Lowden examined:—

Captain J. Lowden. 7 Aug., 1856.

- 636. Do you command the "Maid of the Yarra"? Yes.
- 637. Is your vessel a sailing vessel or a steamer? A steamer.
- 638. What part of the colonies have you been in the habit of trading to? Mostly in Bass's Straits, between Melbourne and Launceston and Hobart Town; a short time between Sydney and Moreton Bay.
- 639. In command of a sailing vessel? No; I was seaman in a small schooner called the "Ann Mary." I never commanded any vessel from any port except Launceston, from which port I have commanded several vessels for the last seven years.
- 640. How long have you commanded a steamer in the present trade? About nine months.
- 641. That is between Launceston and Melbourne? Yes.
- 642. You have had, therefore, good opportunities of ascertaining the different dangers which you have to pass, which are either pointed out by lighthouses or remain unshown? I have been for nearly seven years constantly backwards and forwards about the straits.
- 643. Do you know the eastern coast from Cape Howe to Sydney? No.
- 644. With regard to the dangers that you have to pass between Melbourne and Launceston (your present trade), are there any portions of the coast of any dangers that you pass which, in your opinion, ought to be lighted? Excepting Cape Schanck, I do not know of any.
- 645. Cape Schanck; you think ought to be lighted? Yes; we have many times lost many hundred pounds worth of property for want of a light. In making the heads, from the southward and eastward, and in running down, you cannot depend upon seeing the light upon Shortland's Bluff.
- 646. Would the Schanck light enable you to make the land with confidence, and place you in a position to make the port with safety during the night? Yes, at any time.
- 647. In proceeding across to Launceston do you make Kent's Group light? Very seldom; we generally steer about south-east half south.
- 648. For the entrance of the Tamar? Yes; that is with a fair wind; but, even with the vessel I have at present, I often get down amongst the islands.
- 649. Is the Kent's Group light of any advantage to you when you get down amongst the islands? It is very seldom that any of the Launceston vessels get so far down as Kent's Group, except in stress of weather; but it is a very good light and in a very good position.
- 650. Is there any other light which you would recommend to be erected, beside the Schanck? A lighthouse would be very useful on Wilson's Promontory, but still the Schanck would be the most useful.
- 651. In trading between Launceston and Melbourne you think the Schanck light is the only light absolutely necessary to be erected? Yes.
- 652. With regard to the passage from Sydney to Melbourne, are you sufficiently acquainted with that route to enable you to give the Commission an opinion whether any additional light should be placed on that coast? I have only been through that passage once, as a passenger, and cannot give an opinion.
- 653. In your voyages across to Van Diemen's Land, do you ever see King's Island? Yes; I came close along the eastern coast of it this time.
- 654. Can you give the Board any opinion as to whether a light on that island would be beneficial or not? I think it would be as well as it is. There is a good light on Cape Otway, and a light on the east side of King's Island would be of little or no service.
- 655. Would a light on the north end be of any service? I do not think it would; for coasting vessels do not require it much, and strangers coming down would be more apt to keep over to King's Island if there were a light there, and might get ashore before they knew where they were. At present, with a good light on Cape Otway, it makes them keep more to the northward; and I think it would be better without a light on King's Island.
- 656. Have you traded on the South Australian coast at all? I was trading for about two years, as mate of a vessel, between Launceston and Adelaide.
- 657. Have you frequently passed King's Island? Yes.
- 658. Did you frequently sight it? Several times; I have been at anchor in Sea Elephant Bay.
- 659. In your voyage between Adelaide and Launceston, would a light on King's Island have been of any service to you? No; we always made it a practice to give it as wide a berth as possible, and hugged the main land. The main land is all such bold high land that it must be very dark indeed if you could not see it before you were in danger.
- 660. Does it appear to you that there are any additional lights required to be erected on the main land between Cape Otway and Adelaide? I think Cape Northumberland would be a very important point to light.
- 661. Is it of sufficient importance to require a light there? It would be a very serviceable light there; that is the turning point to the west coast, the same as Gabo Island is on the east coast, and many times a captain carrying on may think he is going to weather it and it may be so dark that he cannot see the land, and he would not know what to do, whereas he might make a passage easily by a light on Cape Northumberland.
- 662. Is there any other point between Adelaide and Cape Otway, which you think it would be advisable to light? None, excepting Cape Northumberland; you might have one on Cape Jaffa.
- 663. But you do not consider that of immediate importance? No; there is a good light on Cape Willoughby.

- Captain J. Lowden.  
7 Aug., 1856.
664. For all purposes of navigation between South Australia and the other Australian Colonies, you think a light on Cape Northumberland would be sufficient? I think so.
665. If only one lighthouse were to be erected, which one would you give the preference to as being the most necessary? I think Cape Schanck.
666. Have you ever paid any attention to the set of the current between Cape Otway and King's Island? No.
667. You are not prepared to say whether it sets ships in any particular direction or not? No; we have always had strong winds, and never had an opportunity of trying the currents, we are so quickly across, and in sailing vessels we generally make it a practice to keep well to windward, and I do not think I was ever becalmed between the island and Cape Otway since I have been in the trade.
668. Have you ever been close to Wilson's Promontory? Within six or seven miles of it.
669. Have you ever landed there? No.
670. Do you know the Rodondo? Yes.
671. Would it be practicable to put a lighthouse on it? I do not think you could land on it.
672. Do you know the Ten-foot Rock? I have never been close to it; I know within a trifle where it is.
673. Did the sea break heavily on it when you saw it? Yes.
674. How often have you been round there? I often get down that way, but never closer than five or six miles from the promontory.
675. Have you always observed a heavy sea breaking on the Ten-foot Rock? Yes.
676. Do you know Cleft Island? Yes.
677. Have you ever landed on it? Never.
678. Can you give an opinion as to whether it would be possible to put a lighthouse on Cleft Island? I never landed there.
679. You are not familiar with the character of any of the land about there—the Glennies, the Seal Rocks, the Rodondo, or Cleft Island? No; I never landed on any one of those islands. I have landed on Rabbit Island, but that is too far in.
680. You are clearly of opinion that it is not desirable to put a light on King's Island or any part of it? I think it is not desirable.
681. For what reason? I think vessels would be more apt to give it a wider berth if there were no light on it.
682. You think a light might induce vessels to take liberties with it? Yes, particularly a vessel coming down from the westward. The only place you could put a light would be on the New Year Islands, but I do not think a light there would be of any use so far inside the Harbinger Rock.
683. Have you been between the Harbingers and the main? No, I never went inside.
684. Have you ever seen the Harbingers? Yes.
685. Are they always a wash? Yes; the rocks are in many places above water and a very heavy sea breaking over them.
686. Have you any further suggestions to offer to the Commission? No, except that I should very much like to see a light on Cape Schanck. I have often found a strong set of current setting on to Cape Schanck and into Western Port.
687. If only one light were erected by the Governments you decidedly would recommend the erection of a light on Cape Schanck first? Yes. [*The Witness withdrew.*]

Captain John Buchan Sydserff examined:—

- Captain J. B. Sydserff.  
Aug., 1856.
688. You command the steamer "Storm Bird"? Yes.
689. In what trade is she employed? Between Melbourne and Port Albert.
690. How long have you been employed in that trade? About three years and a half; but not all the time in a steamer.
691. But between Port Albert and Melbourne? Yes.
692. Have you been sailing a vessel on any other portions of the coast of Australia? Not as master.
693. But as mate? Yes; off and on the coast since the beginning of 1849, in Colonial vessels.
694. In navigating that particular track which you have been made acquainted with, are there any points of the coast which appear to you to require to be lighted? Yes; I think that a light on the Schanck and another on or about the promontory would be very desirable.
695. You think a lighthouse ought to be erected on the Schanck? Yes.
696. Would that enable you to run for the entrance to Port Phillip Heads with a greater degree of certainty than you can at present? Yes, it would facilitate it greatly; in coming along we have to come close along shore with small vessels to keep out of the sea, and there is a strong set into and off from Western Port, and sometimes we find ourselves set up close to Black Head or *vice versa*.
697. That is in consequence of the set into Western Port? Yes.
698. In passing the promontory, either going to the westward or coming from the westward, is there any part of that land which requires to be lighted? I think that a lighthouse would be a very good thing on one of the islands near the promontory.
699. On which island you put it? I would put it on one of the southern Glennies, within a mile of Cleft Island.
700. What benefit would that light be to you if you were coming from the eastward? It would not be so beneficial then, because it would be hid by Wilson's Promontory, but then a man coming that way gets upon bold land.
701. Are there not the Seal Islands there? Yes.

Captain J. B. Sydesriff. Aug. 1856.

- 702. If there were a light upon the Seal Islands and one upon the southern Glennie would the promontory be able to be made in safety? Yes, perfectly; because you would keep the one light in view till you opened the other, and a light there would be of service to vessels going into Corner Inlet and Port Albert. Vessels frequenting Port Albert at night have to run down upon very low land, over shoal water, across the mouth of Corner Inlet, out of and into which a very strong tide sets, the tides of the turn and strength of which are very irregular, running the risk of being set on to extensive sand banks to the eastward or those at the mouth of the inlet to the westward. Any light on the promontory to the southward of Cape Wellington will not assist any vessel bound to Corner Inlet or Port Albert after passing a line drawn through Rabbit Island and the White Rock, the cape having shut it in.
- 703. With a steamer trading to Port Albert you always go between the Rodondo and the promontory, do you not? Sometimes I go right inside of all the islands if I wish to get the assistance of the ebb tide.
- 704. When you commanded a sailing vessel what course did you take then? I always kept between the promontory and the Rodondo.
- 705. You did not keep the open sea to the southward of Sir Roger Curtis's Island? Not unless I was driven there.
- 706. Have you ever landed on any portion of the promontory? I have been in all the bays round the promontory.
- 707. Is there any part of the promontory on which a light could be erected so as to be visible both ways; eastward and westward? Not without putting it up at such a height as that it would be very often clouded.
- 708. Do you know the Rodondo? Yes.
- 709. Is it accessible? I think it might be got up to, but I think it is very doubtful.
- 710. Stokes's chart says it is 1,130 feet high—do you believe that to be correct? Yes.
- 711. Do you know the Ten-foot Rock? Yes.
- 712. Is there sufficient base there to put a lighthouse? I never have been very close to it.
- 713. In working through the straits have you ever found an advantage from Kent's Group lighthouse? I never sighted it but once.
- 714. Then it is not a useful light for the coasting trade? No.
- 715. Would it not be in sight in fine weather in rounding the promontory? In very fine southerly or easterly weather it would.
- 716. Are you of opinion that a light upon Seal Island would be desirable? Upon the northern Seal Island I think it would be very useful, and it would be a good leading mark for the harbour of Corner Inlet.
- 717. Might not a light there be the means of inducing a ship to place herself in that corner of the continent, and have the Nifty-mile Beach under her lee if the wind came round to the eastward? I think she would always have time to get round the promontory. A swell invariably sets in long before the easterly wind comes up with any great force. Several vessels have been stranded on the east side of the banks off Port Albert bay; amongst which a steamer figures bound from Sydney to Melbourne. Others have only been made aware of their proximity by the sound of the breakers, or the sharpness of the swell setting over their extremities. A light on the Seal Islands would in such cases have rendered great service.
- 718. Are you familiar with any other portion of the coast? No, not sufficiently so to give an opinion.
- 719. If only one light were to be erected by the Governments in Bass's Straits, which would you recommend to be done? The Schanck.
- 720. Have you ever sighted King's Island? Play wind bound in Sea Elephant Bay once.
- 721. Is that the only time you ever sighted the land? I think so.
- 722. Do you at all feel yourself competent to give an opinion to this Commission as to the advisability or not of erecting a light on that island or in its neighbourhood? If I were coming that way myself I should never ask for it.
- 723. Do you, from the knowledge that you have of the position of the reefs off the northern end of that island, consider that a light there would be more dangerous than useful? No; because I think any man with judgment would always try to make the other side; and it might correct an error if seen off some time.
- 724. The Otway light? Yes.
- 725. Do you know whether the land in the neighbourhood of King's Island is clouded or not? No; it was very bad weather when I was there, and the Island kept below all the time.
- 726. Are the lights that at present exist at Shortland's Bluff sufficient for guiding a ship to the entrance of Port Phillip? Quite so, I think.
- 727. Do you think a light would be desirable on Point Lonsdale? It would rather be a little two as they now stand.
- 728. You think the two lights now in connection with a light on the Schanck would be quite sufficient for all purposes of entering the heads at night? Yes.
- 729. Would not a light on Point Lonsdale be of great assistance if a vessel lost sight of the Shortland Bluff light? I think the cross bearings of the Schanck would be sufficient to enable her to get the two bluff lights in one.
- 730. You think that a light upon the Schanck would be all that could possibly be required? Yes.
- 731. And with regard to the promontory, you think that would be a useful light—but you do not think it absolutely necessary? It would be a very useful light; but I do not think it absolutely necessary, because the promontory is so bold, you could generally pick it up except in dark weather.
- 732. If it is not so absolutely necessary for steamers it can hardly be at all necessary for sailing vessels? Many sailing vessels would run through them that have to now.
- 733. It would afford facilities for passing which do not exist now? Yes.

- Captain J. B. Sydsorff. 734. And would give greater confidence to the coasting trade in that part of the navigation? Yes; with a steamer we always feel that we can get off it, but a sailing vessel cannot rely upon that.
- 7 Aug., 1856. 735. You have never landed on the Seal Rocks, have you? No.
736. Then you do not know whether it would be possible to erect a lighthouse on them? Judging from appearances, and from the knowledge that there have been sealing parties living on them, I should say there would be no difficulty.
737. Are they very high? No, about 300 or 400 feet.
738. Have you any other suggestions to make to the Commission with respect to that particular part of the coast with which you are familiar? No. [*The Witness withdrew.*]

Captain Henry Tulloch examined:—

- Captain H. Tulloch. 739. Do you command the "Water Lily"? Yes.
740. A schooner? Yes; trading between here and Circular Head.
- 7 Aug., 1856. 141. How long have you commanded a vessel in that trade? Two years last April.
742. Have you ever commanded any other vessels on the coast of Australia or Tasmania? I never have commanded any other vessel but the "Water Lily", but I have been to many places with her. I have been to Launceston continually, once to Sydney, once to Adelaide, and three times to Portland Bay.
743. In going to Sydney after sighting Gabo Island and rounding Cape Howe, is there any point on the coast between that and Sydney which you think ought to be lighted? I think not. I never wished for a light when I was up there; I do not see any reason why there should be one.
744. You did not make the land in the neighbourhood of Jervis's Bay? I was in at Shoalhaven. A light at Jervis's Bay certainly would be of advantage to coasters beating up the coast, as it is required to keep as close in shore as possible on account of the very strong current there.
745. Where would you put the light? On Point Perpendicular.
746. That you think would be an advantage? Most decidedly, to coasters.
747. Is there any other point between Gabo Island and Melbourne Heads that you consider it would be advisable to light? Nothing except Cape Schanck. I am a strong advocate for that light and always was.
748. Do you consider that if a light were erected on Cape Schanck, the present existing lights would be ample for the navigation of the straits when coming from the eastward? Yes; a light there would be useful to all parties, because the present lights at the heads you can only see for about six or eight miles, and that is not sufficient for an important place like this.
749. You are speaking of the Shortland's Bluff lights? Yes; and vessels coming down from the eastward are running right down upon the Otway land, and get right on the top of it before they open the heads, and if they should happen to be six or seven miles out of their reckoning to the southward, they do not see the Shortland's Bluff lights at all.
750. Do you think that the Schanck light would enable a vessel, in coming from the eastward, to pick up her position so clearly and satisfactorily that she could make the harbour at any hour of the night? Yes; and she could run in, in any weather.
751. And in coming from the westward, would it be equally advantageous? I think so. Many times I have seen large ships hove to off Cape Patton for two or three days in thick weather. I recollect one time a large mail ship was hove to three days. I beat up myself and got in easily, and there was she knocking about looking for Port Phillip Heads; whereas if there had been a light on Cape Schanck she would have run for it without any hesitation.
752. Then it is a most important point to be lighted? I think so.
753. Do you think it desirable that a light should be placed upon Point Lonsdale? Most decidedly not. I do not see the least use of it. It might have been of use before the second light was put at Shortland's Bluff.
754. Do you think that is all that any mariner would require? Yes.
755. With regard to the promontory, do you consider that it would be at all necessary that a light should be placed there? I do not.
756. You think it is quite sufficiently clear, bold, and approachable without any light? Yes, and if a man is leaving Port Phillip Heads, considering the short distance between this and the promontory, he must know where he is within two or three miles, and coming from the eastward they have got the lights at Kent's Group and Gabo Island, which are quite sufficient.
757. In passing over to Circular Head do you ever sight King's Island? I have done so several times.
758. What is the description of atmosphere that generally surrounds that island? I have seen it in all kinds of weather, very clear and very thick.
759. What is the peculiar feature as to any light which might be erected there—would it be likely to be continually clouded? No; from what I have seen of it I think it would not be more clouded than any other land would be in bad weather.
760. What is your opinion with regard to the erection of a light on that island? I think to ourselves as coasters, it would be of no great benefit, but to vessels coming from home and from Adelaide, after being a long time at sea, it would be very beneficial. I think myself that the New Year Islands would be the best place for a light.
761. If any light were to be erected at all you think that the New Year Islands would be the better spot, as being more available for vessels coming from the westward than if it were erected on Cape Wickham? Cape Wickham would be the best for the coasters, but for the general navigation of the straits I think the New Year Islands would be the best site.
762. You think it would be an advantage to the shipping to have a light on the New Year Islands? Yes.
- 763.

763. Do you know the position of the Harbinger Reefs? Yes.
764. Do you think a light on the New Year Islands would induce a vessel to borrow on King's Island unnecessarily, and thereby bring her into danger? If there were a light on the New Year Islands the master of a vessel would know his position at once.
765. You think it would not lead him into danger? No. My object in recommending the New Year Islands is, that vessels making the land to the southward would have an opportunity of seeing their position, which they would not have if the light were erected upon Point Wickham, which being very high would probably be clouded, and the light would be obscured by the intervening of the New Year Islands.
766. You say the New Year Islands would obstruct the vision of a light on Point Wickham if a vessel were to be southward of them? I think so.
767. What is the height of them? I should suppose that they are about 200 feet high.
768. And you think if a vessel were to be southward of the New Year Islands they would prevent her seeing a light on the north point of King's Island, even supposing it were clear weather? Yes; and from the distance, they would hardly be able to see it even if they did not intervene. There are many lights on this coast which cannot be seen above fifteen miles off.
769. Are you aware that the principal wrecks which have occurred on King's Island have been to the southward of the New Year Islands? I do not know. I know that ships have frequently made to the southward of King's Island.
770. Would a ship in a heavy westerly gale, if she was near the Harbinger Reefs, be able to see a light on the New Year Islands? Yes.
771. Do you know the anchorage in Franklin Roads? I have never been in there.
772. You do not know whether it would be available for a large ship to take shelter there? I do not.
773. If a light were erected on King's Island at all, you say you would recommend its being erected on the New Year Islands, and not on the North Cape? Exactly.
774. Do you think it would be better to have a light on the New Year Islands, or to leave King's Island altogether unlighted? I think it ought to be lighted. It is surprising that with a northerly wind, when a man is coming along this coast, he will find himself set in eight, or ten, or twelve miles to the southward in twenty-four hours, and the wind right off the land.
775. With the wind at the north there is always a strong current setting to the south? Yes.
776. You say that you have been between Port Phillip Heads and Adelaide? Yes.
777. And also from Circular Head to Adelaide? Yes.
778. In your opinion is there any point on the coast between Cape Otway and the entrance to Spencer's Gulf where it would be desirable to place a light-house? Cape Northumberland.
779. Most decidedly? Yes.
780. Is there any other point between Cape Northumberland and Cape Otway on which you would recommend a light-house to be placed? No. I do not think a man ventures in-shore there sufficiently to render a light necessary. It is a very nasty coast there.
781. You think that a ship has no business to approach there at all? No, not unless it was particularly fine weather.
782. Then you think sufficient would be done by the erection of a light on Cape Northumberland for the safe navigation of that part of the coast? Yes; and a light there would be a great advantage to vessels from home.
783. You would recommend one to be placed on the Schanck and one on Cape George, as the other two points? Yes.
784. Are you acquainted with the southern part of Van Diemen's Land? No, I was never round there.
785. Or the eastern coast? I was never round there.
786. Have you been to Launceston? Yes.
787. Are there any lights required between Melbourne Heads and Launceston, or between Launceston and Sydney? No.
788. Are you familiar with Banks's Straits? Yes.
789. Do you consider the lights sufficient there? Yes; and a beautiful light it is at Swan Island.
790. Have you any further suggestions to make to the Commission? No. Cape Schanck, I think, most decidedly, should be the first place to be lighted. [*The Witness withdrew*]

Captain H.  
Staloch.  
7 Aug., 1856.

Captain Robert Knarston examined:—

791. You are the commander of the schooner "James"? Yes.
792. Where have you been in the habit of trading? To Launceston and Adelaide chiefly. Principally between Launceston and Melbourne, and Melbourne and Adelaide.
793. Always in a sailing vessel? Yes.
794. What trade are you employed in now? Between Melbourne and Adelaide. This last voyage I went from Adelaide to the Mauritius, and returned to Adelaide again, and I am going into the trade again.
795. Are you quite familiar with the route between Melbourne and Adelaide? Yes.
796. Is it your opinion that any thing is desirable in the way of lighting between Cape Otway and Kangaroo Island? Yes; I consider that a light would be requisite on Cape Northumberland.
797. That is the turning point after passing Cape Otway in getting to the northward? Yes.
798. You think Cape Northumberland would be a good position for a lighthouse, and that it would be beneficial to the navigation of vessels proceeding to Adelaide from here? Yes.
799. Cape Northumberland is a low point, is it not? Yes; but it is generally a place from which we have to keep away in coming from Adelaide with the wind at south, when if there were a light there we should be bolder than we are, and should be able to save time.

Captain R.  
Knarston.  
7 Aug., 1856.

- Captain R. Knarston.  
7 Aug., 1856.
800. Have not a good many vessels been wrecked on that point? Yes; vessels coming from England.
801. Would a light have prevented them from going on shore? It might.
802. Is that a part of the coast where vessels coming from England or from the westward would have made the land? No; it is for the benefit of the coasters principally that a light would be needed there. I do not see that any vessels from England would have any business there, unless driven there by the wind.
803. Would vessels that were likely to be wrecked off Cape Northumberland be bound here or to Adelaide? They would be bound here.
804. On this side of Cape Otway is there any additional light required on this coast—between Cape Otway and Wilson's Promontory? There is Cape Schanck. A light may be requisite there.
805. Do you think a light on Cape Schanck would be a useful light? I think it would.
806. Would you, in making for this port in coming from Adelaide, consider that having a light on Cape Schanck would enable you to stand over with a greater degree of confidence than you do now? It would, undoubtedly.
807. Would it enable you to place your ship in a position to make the port? By seeing a light on Cape Schanck we should know better our position. By getting the bearings of the Schanck and the Heads it would give us exactly our position, whereas now we must guess our distance from the lights.
808. The Shortland's Bluff lights are not of such a character as to be seen at any great distance, are they? On a clear night you may see the high light ten or twelve miles.
809. The light you would suggest to be placed on the Schanck should be a powerful light, so as to be seen at a considerable distance? Yes.
810. Have you had an opportunity of judging respecting King's Island? No.
811. Did you ever sight it? Yes, I have sighted King's Island.
812. In coming from Adelaide to Melbourne do you ever approach it at all? No.
813. Would a light on that island be of any service to ships coming from Adelaide? I do not think it would be of any service to ships coming from Adelaide, because vessels always try to make Cape Otway; I think that if there were a light on King's Island vessels would make more bold with it than they do at the present time.
814. Do you think it would be an advantage to make bold in approaching the island with reefs of the nature that there are there? It would be an island I should try to keep away from.
815. Do you think it desirable that a light should be placed on King's Island? It might suit vessels from Launceston bound here, or from Hobart Town, or that way; it might answer for them, and it would be desirable for those vessels.
816. Would they approach King's Island unless they were driven there? Unless they were driven there I do not think they would approach it.
817. Would a light on King's Island be of any considerable advantage to them? It would be certainly of advantage. It would be a different light to Cape Otway, and it would even be an advantage to vessels coming from the westward.
818. Then you are decidedly of opinion that it is desirable to put a light on King's Island? It would be desirable to have a light there.
819. Where would you propose to place it, or have you ever considered that subject? I have not thought of it much.
820. The Schanck light you think would be a great advantage, and also Cape Northumberland light? Yes.
821. Have you ever passed out of the straits on the east coast of Australia towards Sydney? I have been once round Wilson's Promontory.
822. In a sailing vessel? Yes.
823. Were you master of her at the time? Yes.
824. You cannot say that you are familiar with Wilson's Promontory? No.
825. You consider that all the purposes of safe navigation with Adelaide would be answered if there were a light on Cape Northumberland? Yes.
826. Have you any further suggestions to offer to the Board with reference to the improvement of the navigation between Adelaide and Melbourne? No.
827. Have you seen the Cape Otway light frequently? Yes.
828. Is it a good light? It is a very good light. [*The Witness withdrew.*]

Captain Robert Williamson examined:—

- Captain R. Williamson.  
7 Aug., 1856.
829. What vessel do you command? The "Lady Hayes," barque.
830. Where do you trade? I have made several voyages from England here and from Hongkong here.
831. Have you ever been round the straits up to Sydney? Never.
832. You always entered Bass's Straits from the westward? Yes; I have always come in by Cape Otway.
833. Has it ever occurred to you that it is desirable that any other lights should be put on the coast of New Holland? On Cape Northumberland; that, I think, is the only spot at which it is necessary; when we are going back from here we may sometimes get out of our way in rounding the Leeuwin, and a light there would be of great advantage to vessels passing round there.
834. It is a long low point, is it not? Yes; and in the night-time you might get ashore before you were aware of it.
835. Would that light show at a sufficient distance to prevent a vessel from approaching sufficiently near to be in danger? Yes; if it is any sort of a light you might see it twenty miles off.
- 836.



836. In coming from the Isle of France or from England, and running for the straits, will you be kind enough to give the Commission your opinion as to whether any advantage would be gained to navigation by placing a light upon King's Island? I think it would be very requisite for vessels coming from England or the Mauritius.

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837. Coming from the westward? Yes.

838. You think a light on King's Island would be a benefit? It would.

839. You are aware that this subject—of a light on King's Island—is one that has been very much criticised and discussed in these Colonies: have you ever turned your attention to the subject? I have. In this last passage we had a long tack round the Leeuwin, and we fell in with a set which, if it had been thick weather, might have set us ashore on King's Island before we knew it. I had the wind pinched, and I just made Cape Otway, and by the dead reckoning we found a set of forty miles every twenty-four hours going right away to the south-east, and if we had not been able to get a sight for three or four days we might have been right ashore on King's Island.

840. Looking at this chart of King's Island here, would you give your opinion as to the position in which a light should be placed? I think the New Year Islands would be the better place to put a light. I have studied the island a good deal in my chart.

841. Have you ever anchored in the Franklin Roads? Never.

842. Are you aware that there are two formidable reefs that lie a short distance from the north end of the island? Yes.

843. Do you think that any light on the island would lead a vessel into danger from those reefs? No. It would take her clear of danger. It would warn her of it.

844. You opinion is, that it would be beneficial to have a light there? Yes; for all vessels coming from England, or the westward, bound for here or Sydney, or Launceston.

845. In making Port Phillip Heads, coming from the westward, have you found any difficulty? I never found any difficulty in making the land.

846. Or in making Shortland's Bluff light? No; I always made it very accurately.

847. Have you ever had the light so shut in by Point Lonsdale that you could not see it? Yes; I had it this time shut in.

848. Then you got to the eastward as soon as you could? Yes.

849. Do you think any advantage would be gained by having a light on Cape Schanck? Yes.

850. Would not a ship then be able to pick up her cross bearings much quicker? Yes, it would be a great improvement then.

851. Then you are decidedly of opinion that a light on Cape Schanck is very desirable? Yes.

852. Are you familiar with any other portion of the coast? No.

853. You say you have thought over this question of a light on King's Island very considerably? Yes; and I have been wondering that there is not a light on it. When I found the set this season, owing to the prevailing north-east winds, if thick weather had come on we should have been down on the island before we knew it. I never found so great a set as this year. The light there would have to be a standing one, in contradistinction to the revolving light at Cape Otway.

854. Has it ever occurred to you that a light on Cape Nelson or Cape Bridgewater would be any advantage as a guide to Bass's Straits? I do not think it is necessary to place a light there.

855. Supposing a light were placed on Cape Nelson, do you think the masters of ships coming from the westward would try to make it in preference to the Otway light? No; I think they would make the Otway light in preference to any; it is a very fine light, and a very fine place to make.

856. Have you any other suggestions to offer to the Commission with respect to any other portion of the straits? No; I am not well acquainted with the straits generally. [*The Witness withdrew.*]

Captain Joseph Walsh, examined:—

857. Do you command the "Eagle" schooner? Yes; trading between Sydney and Melbourne.

858. How long have you been in that trade? About eighteen months.

859. Usually commanding sailing vessels? Yes; this is the third vessel I have had in the same employ between here and Sydney.

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860. Have you been trading to any of the other Australian Colonies? Not to the southward. To the northward, I have traded between Sydney and Newcastle.

861. In coming from Sydney, or proceeding from Melbourne to Sydney, are there any parts of the coast between the Howe and Sydney Heads which you consider should be lighted? I consider that a light somewhere about the promontory would be very requisite.

862. Taking up to the northward, between Gabo Island and Sydney Heads, is there any part of the coast that you think should be lighted? I think a light would be very convenient on Cape George at Jervis's Head.

863. Have you ever found in standing to the northward that the land about Cape George apparently runs further to the eastward than the charts would justify you in supposing? Yes; in many instances in running down from Sydney, I have often found the heads extend much further than I thought by the course I was steering.

864. Do you think there is an indraught there? There is a great indraught into Jervis's Bay.

865. Do you think a light there would be beneficial to ships passing and repassing? Yes, it would.

866. Is that the only point you would recommend to be lighted? No; I would recommend that Twofold Bay should be lighted.

867. That would be merely with reference to running into the bay for shelter? That is all; so that you could take it in all weathers. You cannot take that bay at night time now if it

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is blowing hard, and it is often very requisite to take it, but a stranger cannot attempt it at all, if it is after dark.

868. You would consider a small harbour light all that was necessary there? Yes, just to point out a refuge port for vessels coming round in heavy weather.

869. Do you think that the position of the pillar which was erected by Mr. Boyd would be a proper place to erect a light? No; I think there is a point further to the northward that would answer better; there is another turn in the bay there.

870. After passing Gabo Island is there any other portion of the coast of Australia that you consider it would be requisite to light? Yes, there ought to be a light at the promontory; on one of the islands if it was possible to put it there—I should say on the Redondo if possible.

871. Have you ever seen the Rodondo? Yes, very often.

872. Do you think it would be possible to put a light there? It is very inaccessible, but there is nothing impossible to be done.

873. Do you think it would answer all the purposes of navigation to have a light at the promontory? Yes that would be quite sufficient for any man to run through the straits in any weather at all.

874. In sailing vessels do you pass near the promontory or do you keep out to sea? I always take the channel between the Rodondo and the main, because it is much shorter.

875. Have you ever seen the Ten-foot Rock? Yes.

876. Have you ever landed on the Ten-foot Rock? No, I have been drifting about it half a night.

877. Is there a heavy sea breaking over it? No; I have been in there at all hours, and all times of the day and night, and I never saw any heavy sea there.

878. Do you think that the Ten-foot Rock would be a good position for a lighthouse? It would be the best position in the neighbourhood.

879. Do you think it would be possible to put a lighthouse there? Yes; there are worse places than that with lighthouses on. I think it would be very easy to put a light there.

880. What height is the rock? I suppose the place where a lighthouse might stand is twenty-five feet high.

881. If it could be accomplished would not that answer the purpose? There would be no danger then at all in the straits if a light were there.

882. Have you seen the Rodondo frequently? Yes.

883. Is it very high? Yes.

884. Do you know Cleft Island? Yes.

885. Have you ever landed on it? No.

886. Would that be a good position for a lighthouse? It would be for vessels coming one way, but many times you would have the light shut out. If the light was on the Ten-foot Rock I think that would be the best position.

887. Do you consider that the navigation of the straits is attended with much danger for want of a light on that point? Only in thick weather; in thick weather a light there would be very useful.

888. Is there any particular set of the current about Wilson's Promontory, or are the tides regular there? On one occasion I was set from the promontory up to the southernmost Seal Island, showing a strong set to the northward and eastward.

889. In passing from the promontory towards Port Phillip Heads, is there any other point on the coast that strikes you as requiring to be lighted? Cape Schanck is the only point I think necessary to be lighted.

890. Do you think the Schanck is an important position to be lighted? Very, on account of not opening the Shortland's Bluff lights till you are quite abreast of the harbour.

891. A light on Cape Schanck would give you great confidence in making the port? Yes; in south-east and south-west gales it is a lee corner, and you have no guide until you open the lights. You can see them at sea bearing about north and by east clear of Point Nepean. I think north and by east is the first point you can see them in.

892. Have you been from Port Phillip Heads to Adelaide? No.

893. Have you made many voyages as an officer of a ship from the westward? I have been out from England to Portland Bay and back.

894. Have you ever considered the question of putting a light upon King's Island? I was driven one time in sight of King's Island, and at that time I was reading something about a light being erected there, and I thought it would be a very useful thing. I left Port Phillip very light in ballast and with the wind from about south-east, and I was driven over to Cape Wickham.

895. You have not given much consideration to the question of a light on King's Island? No.

896. Are you prepared to give an opinion as to whether you think it desirable that a light should be put there or not? I would recommend a light being put there.

897. Looking at the chart, at the north end of King's Island, can you offer any opinion as to where you think that a light should be placed there? I have not given the subject much consideration, and I should hardly like to give a positive opinion without considering it more.

898. Are you acquainted with the coast of Van Diemen's Land at all? I have been down the east coast.

899. Has it ever struck you that any necessity exists for a light on the eastern coast of Van Diemen's Land? I think a light on St. Helena Point would be very desirable. That is the point we steer for in coming from the northward in making Van Diemen's Land.

900. Do you know Banks's Straits? No, I have not been through there.

901. Have you any further suggestions to offer to the Commission? No.

902. If only one lighthouse is to be erected in Bass's Straits which do you think is most important? I think the light on Wilson's Promontory or one of the islands adjacent to it.

[The Witness withdrew.]

Charles

Charles Ferguson, Esq., examined :—

C. Ferguson,  
Esq.

- 903. You are the Chief Port and Harbour Master of this Colony? Yes.
- 904. And have traded as commander of vessels to these colonies in the early part of your life? Yes, from 1838 to 1850, when I settled here.
- 905. And you have a very general knowledge of the coast on both sides, including Sydney and Adelaide? Yes.
- 906. In entering Bass's Straits from the westward, is there any additional lighthouse anywhere on the coast west of Cape Otway that you think desirable with reference to the over-sea trade? I think a light is wanted now at or in the neighbourhood of King George's Sound to commence with, mainly with a view of benefiting the ocean line of steamers and vessels working round the Leeuwin and vessels looking for shelter. I believe that the next light on the coast that would be beneficial would be at Cape Borda, at the north end of Kangaroo Island, or on the Neptune Island.
- 907. Might that light at Cape Borda be considered a high road light? Certainly.
- 908. Then, passing on, what is the next point? Cape Northumberland.
- 909. That you consider an important position not only for the over-sea trade, but for all vessels coming from Adelaide here, or bound to Adelaide from here? Yes; I consider it is the turning point in the coast navigation, and is beset by adverse currents; the magnitude of the trade and the number of wrecks which have occurred there renders a light highly necessary.
- 910. Would not that also be a useful light for vessels working round the Leeuwin bound to India during the summer months? The main use of a light there is for the coasting trade; but I think if there were a light there a man knowing that would stand in and be benefited by it.
- 911. Is not the coasting trade from the Colonies of Victoria, New South Wales, and Tasmania to Adelaide, very considerable? Yes; very considerable.
- 912. There is no other part of the coast that you consider requires a leading light between Cape Otway and Adelaide, excepting the points that you have now stated? I think a light would be serviceable to the general over-sea trade on Cape Bridgewater or Cape Nelson. If a light at Cape Northumberland were decided upon I think Cape Nelson would be the better position of the two.
- 913. Do you think it is absolutely necessary that a light should be placed upon either of those capes supposing a light be placed upon Cape Northumberland? I think the time will come when it will be necessary; and in settling the general scheme of lights I think it should be considered, or you might hereafter find a difficulty in giving that light a proper character, either revolving or fixed. I think, considering the trade now between here and Adelaide, and the keen competition which exists, a light on Cape Nelson and another on Cape Northumberland would generally benefit the trade both ways.
- 914. If there were a light on Cape Nelson would the master of a vessel coming from the westward, entering Bass's Straits, try to make the light at Cape Nelson instead of the Otway light? I think not. A man might make it from accident, and if a light were there it would be serviceable to him, more especially the larger steamers from India would keep the coast aboard and make the light.
- 915. But for a safe entrance into Bass's Straits the light upon Cape Otway is the main light? Yes.
- 916. And in the right position? Yes.
- 917. Supposing a light to be placed on Cape Nelson, would not that, to a certain extent, be serviceable to the harbour of Portland? Yes.
- 918. And for that reason would you give the preference to Cape Nelson over Cape Bridgewater? Yes; but I think that is a question which could better be answered by a person aware of the relative heights of the two capes. I know that Cape Nelson is some three miles further south than Cape Bridgewater, and I have a doubt in my mind whether the height of Cape Bridgewater, and the danger of that bight between the two capes, might not call for a light to be at Cape Bridgewater instead of Cape Nelson.
- 919. Then you would not like to give a positive opinion as to which of those two capes it would be desirable to put a light upon until you have visited them? Not until I have been and stood upon the two capes.
- 920. In approaching the western entrance of Bass's Straits have you ever found a ship that you commanded receive any particular set from the current? Yes; in nearly all my voyages I have found that I was set to the southward, and I have found in two instances that where I calculated upon making the Otway land, I have made the northern point of King's Island rather disagreeably close, arising from a set to the southward.
- 921. You have, of course, considered the question of a light on King's Island,—would you favour the Commission with your opinion upon that much disputed question? My opinion, I fear, will be adverse to most of the opinions expressed. My opinion is that there should be a light there, and that it should be on the New Year Islands. A light on the New Year Islands is not so much needed as a guide as to warn men of the danger which they are in, resulting from this very current; and the light ought to be on the most weatherly part of the danger. A light there would assist vessels subjected to the southerly set which is experienced there. It is my impression, borne out by conversing with men who have been wrecked there, and from observations and noticing it for a period of something like sixteen years, that all the wrecks which have occurred there have arisen from men being largely out in their reckoning, and if the light were on the northern end of the island it would not help them much, because a man might be so far to the southward as not to see the light; he would run probably with a greater amount of confidence from the fact of a light being there, and he would be equally liable to lose his ship by being beyond the range of the light.
- 922. Because if he made the land to the southward of the northern part of the island he would

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would have no opportunity of seeing the light, whereas if it were on the New Year Islands he would see it? Yes.

923. In sailing round the island, and being in its neighbourhood, have you observed whether it is subject to be capped or clouded by fogs, or whether it and the neighbouring islands are sufficiently clear to justify the supposition that the light would be seen in anything like ordinary weather? I think the middle of the island is liable to be enveloped in fog from the marshy land in the interior of it, but both the northern point and the New Year Islands would be visible in ordinary weather when other land is visible.

924. The New Year Islands are tolerably high? Yes.

925. Have you ever landed on them? No, but I have passed close round them.

926. Do you know the nature of the anchorage in Franklin Roads? I have never anchored there, but there is good refuge for vessels, and a light being there would be of very great service. The master of the "Flying Arrow" told me that one of his objects was, to get round there, cut away his masts, and save his ship. The "Whistler" was beating about all night to and fro, and at daylight he was too far in shore to get into the anchorage. My opinion is, that had there been a light there, the captain would have calculated his position and run for it, and either let go both anchors, or have done those things that a sailor would do under such circumstances, and so have saved his ship.

927. Supposing a ship to be in a heavy gale from the westward, with the Harbingers under her lee, would she see the light on the New Year Islands in thick weather? If a vessel were caught with a westerly gale midway, between the New Year Islands and the Harbinger Rocks, the bearing of the light on the New Year Islands would enable him to clear the Harbinger Rocks easier than a light on the north end of King's Island would, inasmuch as he could not estimate his distance from the north end of King's Island, and consequently could not say how far he was from the rocks in a direct line.

928. You think that the light should be erected upon that island? I do.

929. You know that there is an impression abroad that a light in that neighbourhood would be more likely to bring vessels into danger than to carry them out of danger? There is that impression.

930. You think that is not a well-grounded objection? No, if proper care be taken.

931. Do you believe that there are any practical or engineering difficulties in erecting a lighthouse on the New Year Islands? No. I think the expense of erecting a light on the New Year Islands would be something like half what it would be on King's Island, because in the one case you could land the supplies on the island without any difficulty, and in the other case you would have to carry them fourteen miles overland, and have a road to make.

932. From your experience, in your judgment a light on the New Year Islands would be more advantageous to ships coming from the westward than a light on King's Island? Certainly.

933. Have not the majority of the wrecks on King's Island been to the southward of the New Year Islands? They have all been to the southward; and in the case of the unfortunate "Catariqui," I knew the second officer, and I ascertained that the cause of the wreck, in his opinion, was that the ship was considerably south of the position they calculated she was in, and in my opinion a light on the New Year Islands would have saved that ship at that time. In the case of the "Rebecca," a vessel that was wrecked close to the New Year Islands, the master's reckoning was out somewhere about thirty miles; he was south of his reckoning, and a light on the New Year Islands I believe would have saved him.

934. Do you know that at the time the lighthouse was erected on Cape Otway it was contemplated also to erect one on the New Year Islands? Yes.

935. What was the reason that that intention was not carried out? There was some impression that a light there would induce men to seek the coast which they should rather avoid; there was also a dread at that time of our own coast, between Moonlight Head and Cape Otway, and it was supposed that men knowing there was a light at the north end of King's Island would steer for it and get into difficulties.

936. If one light only was to be erected, you think Cape Otway was the most judicious site? Yes.

937. Have you ever seen the Navarino Shoal? I have seen the wash of it.

938. Have you examined the Harbinger Rocks? I have been quite close to them. The southernmost is a wash, the other one the sea breaks upon, and there is a considerable tide there. It is hardly a regular ebb and flow, but is governed mainly by the winds.

939. You think it would be perfectly impracticable to erect a lighthouse on one of the Harbingers? I fear it would be perfectly impracticable. In these days nothing is impossible, and could a light be put there it would be the point for it, but I think it is not worth while to entertain the idea, the roll of the swell washing over it is so great.

940. In entering Bass's Straits from the westward and approaching Port Phillip, what other lighting do you think desirable to render the approach to the port more easy than it is now? It is a point which I have considered a good deal, and now that we have got a leading light erected I think the question of a light on Point Lonsdale is settled, but I do think that to guard against casualties, although it may not be urgently required, a light should ultimately be placed on Sandy Point, or if the high light at Shortland's Bluff could be elevated it would be very desirable.

941. You think that either the present high light should be heightened, or an additional light be placed upon Sandy Point? Yes, in order to illuminate the Barwon Bight.

942. That you do not consider a high road light, but only a harbour light? Only to serve vessels bound to Port Phillip.

943. What is your opinion of a light on any of the points eastward of Port Phillip? One on Cape Schanck certainly is desirable. I think the Schanck light should be the first to be erected.

944. As being the one of the greatest and most urgent necessity? Yes.

945. Do you consider that a light on Cape Schanck would be any assistance to vessels bound through the straits, as well as to those bound into Port Phillip? Yes, occasionally; but I look upon it more as a Port Phillip light than an over-sea light, but there would be times when men beating in the straits would be guided by it, and knowing it was there they would stand in with greater confidence.
946. Would it not be ultimately of importance to Western Port? Of very great importance to Western Point, and a man might frequently run in there and take shelter.
947. Is there much trade between Western Port and Melbourne? There is a growing trade, and I have no doubt it will increase. Quarries are being opened up there, and the old cry of coal being found is revived again, and may cause a considerable traffic there.
948. If there were a light placed upon Cape Schanck, a ship, by getting a cross bearing to that, and another to Shortland's Bluff light, would have very great confidence in entering the harbour at all times? Yes.
949. In point of fact, the advantages of a light on Cape Schanck are so manifest that there can be no doubt about its necessity? None whatever.
950. In proceeding from Port Phillip to the eastward, what point of the coast would you next consider it advisable to have a light placed upon? Cleft Island, or the Ten-foot Rock, if practicable.
951. Is the light that you would propose to erect there a light necessary for sailing vessels as well as for steamers, or is it merely a light for vessels which cut off the corners? No; all the traders that pass through the straits would benefit by that light; over-sea vessels would benefit largely by it. A ship from England to Sydney would benefit largely by it, for in strong westerly gales a man finds himself down there and is unwilling to heave to, and with this light there instead of heaving to he would run.
952. You think the light should either be erected on Cleft Island or upon the Ten-foot Rock? Yes.
953. The promontory itself you would not recommend? No, the promontory is too great a bluff; it is not a sharp jutting point, and it would not benefit all the trade.
954. It would only be available for one side? Yes, I fear so.
955. It may become a question in considering the general over-sea lights, whether instead of thinking of a light on the Ten-foot Rock, a light on Cleft Island, and another on the southernmost of the Seal Islands would not benefit the over-sea trade more, you would then have bearings that would carry you in perfect safety round? Yes, that would be the best arrangement.
956. Would a light on Cleft Island be always visible to vessels coming from the westward under ordinary circumstances? Yes, I think so; there is nothing to obstruct the view; there is no high or marshy land to cause the vapours which sometimes cover such points.
957. In the case of a vessel being up by Cape Liptrap the light would be obscured by the Glennies, would it not? It might be for a short time, but I do not think any danger would result from it.
958. Would a light on the Seal Islands be serviceable for the approach to the harbour of Corner Inlet? Very serviceable, and for Port Albert also.
959. Might not the effect of a light on the Seal Islands be to induce a stranger to go into that bight, and might not be occasionally be placed in a disagreeable position with respect to the Ninety-mile Beach? I think not. I think the absence of a light leads many men down to that bight when, if they had a light, it would warn them against it.
960. Supposing a large vessel, just to the eastward of the Seal Islands, being suddenly caught with an easterly gale, which we know occasionally comes in with great violence and very suddenly, would not her position then be one of considerable difficulty? With a wind in that direction she could stand to the southward and get away off at once; she would then open the Cleft Island light and run for it.
961. In your opinion would the master of an over-sea large ship make use of the passage round Wilson's Promontory in preference to making use of the Kent's Group light in passing through the straits? A total stranger, I think, would not. There is a dread of that beach in most men's minds. With a north-west wind every man would, because it takes some time before it hauls round much to the southward; but I think a man with a south-west wind would keep Kent's Group light aboard, knowing that the wind would probably souther as the day increased; but I believe that the greatest benefit of those two lights I have spoken of would be to the coasting trade.
962. Would they not be of great service to the large ocean steamers which may be expected here? They would be of great service. The "Melbourne" had a most narrow escape under Waterloo Bay, thinking they were well to windward; and a light on Seal Island would certainly have saved them; and I think a similar difficulty was experienced by Captain Mathews in the "Great Britain"; in iron vessels the difficulty of ascertaining the error of the compasses is very great, and an error there of a quarter of a point would be a serious matter; and as the bulk of the trade are iron vessels, I think it is a very important point that they should be guarded there by a light.
963. But supposing the engineering difficulties could be overcome, a light on the Ten-foot Rock would be preferable to the two lights you have mentioned? No; I do not think so. There is a distance of about twenty miles from the Ten-foot Rock to the Seal Islands, and in thick weather you could not see that distance.
964. Therefore you think the most advisable way of lighting that turning point would be by having two lighthouses, one to the east and the other to the west of that promontory? I do; but if it is decided to have only one light I would prefer the Ten-foot Rock to Cleft Island. The only difficulty with the Ten-foot Rock might be that the Rodondo would intercept for a small space the rays of light passing from the lantern on the Ten-foot Rock.
965. Do you think it is perfectly impracticable to put a light on the Rodondo? No; I do

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C. Ferguson, Esq., not think it is impracticable; but I think when it was there it would be useless, from its great height.

7 Aug., 1856. 966. You say another advantage would accrue to the coasting trade from a light on the Seal Islands which would be the guide to Corner Inlet and Port Albert, two ports which are of growing importance? Yes.

967. Would you in such a case, if it were decided to put two lights, one on each side of the promontory, select the southernmost Seal Island for the position of one? I would, because my endeavours would be to guard men coming to the northward, and consequently I would push the light as far south as possible.

968. Have you ever landed on the Ten-foot Rock? No.

969. Have you seen it frequently? I have watched it passing in a steamer as a passenger. I have not seen it as a commander.

970. Do you think it practicable to put a lighthouse there? I do, from what I have heard from others, and from the shelter I think a vessel could get in the neighbourhood of Waterloo Bay. Although it would be a work of difficulty I think it would be quite practicable, and if a lighthouse is not placed on it I should recommend that an iron beacon be erected on it.

971. At the time you passed the Ten-foot Rock was it blowing hard? No, it was very fine weather.

972. Then you cannot say what the effect of a sea there would be? No.

973. Have you landed on the promontory? No, I have sailed very close to it.

974. The high land on the promontory is to the south-east part of the promontory? Yes.

975. Then any light placed there would be useless to vessels coming from the westward? I fear it would be shut out, otherwise that would be the best place, in consequence of the facility of landing supplies at Waterloo Bay.

976. What, in your opinion, is the height of Wilson's Promontory, judging by estimation? 500 or 600 hundred feet. I think the promontory would not answer; it would be only available for vessels coming from the eastward, I do not think it would be of much service to vessels coming from the westward.

977. If it were found from actual survey that a point of the promontory could be found at which a light would be visible in both directions, do you think it should be placed there? Yes, decidedly, because of the facility with which you could communicate with the lighthouse.

978. If a light could be erected there so as to show both ways, do you think a light there would answer the purpose as well as two lights showing, one to the east and one to the west? No; I think the two points I have named would warn a man before he got into any of the dangers, which the promontory would not do, for he might get into danger before he saw the light.

979. Do you know whether there are any engineering difficulties with respect to the erection of a lighthouse on either of the two islands you have spoken of? I do not.

980. You have not landed on either of them? I have not.

981. You do not know whether they would be difficult of approach or the contrary? I think there would be no great difficulty in approaching Cleft Island; I have heard from others that it could be easily approached. The other I have no knowledge about.

982. Have you ever been across to Launceston or any part of Van Diemen's Land from here? I have been to Hobart Town, never to Launceston.

983. Have you passed through Banks' Straits? Yes.

984. Do you consider that that channel is sufficiently lighted? I think so.

985. Do you think that the Kent's Group lighthouse is any assistance to vessels leaving Port Phillip for Launceston and Hobart Town? It is not in the direct route, but I think it is a decided assistance to them, and largely an assistance in the Port Albert and Sydney trade.

986. You think there is no occasion for any further light in Banks' Straits? No.

987. Do you think it desirable that any light should be placed on the eastern coast of Tasmania? My impression is that a light should be placed on the Eddystone Point. A vessel making a voyage over-sea would also derive a great benefit from a light on the south-west cape.

988. Have you been round the coast since the Gabo Island light has been placed there? I have not.

989. Do you think that light is placed in a proper position? I have not seen it; I think it is placed in a proper position, but the light is inefficient, from all I hear. A wooden structure so liable to be destroyed by fire should not be permitted to remain, but there should be a stable iron or stone structure put there at once. It ought to be a higher and better light.

990. You think the point is so important that it is time something more than a temporary lighthouse should be erected? I think it should be one of the best lighted points on the coast, from being at the end of a deep bight, and one of the main turning points in the coasting and over-sea trade to New South Wales.

991. Does it strike you that any light should be placed between Cape Howe and Port Jackson? Yes. I think there is no doubt about the necessity of a light on Jervis's Head or Cape St George. The actual position I cannot say, but I have a deep recollection of being led down there on one occasion in going to Sydney, a good many years ago, and finding my ship very close in under the land when I expected to be some distance farther off. There is a great indraught there. I believe the Twofold Bay tower if lighted up would be most beneficial to ships taking refuge.

992. That is merely as a local light? As a local light, and it would be of service to vessels passing also.

993. Would there be any difficulty, in your opinion, in keeping up a communication by the Government of Victoria with the Wilson's Promontory lights, supposing them to be erected? No; but to prevent casualties those two island lights and King's Island light should always

have

- have six months stores in advance. We have that at Cape Otway; when I send twelve months supply, and that is landed, there is eighteen months supply on the station.
994. What oil do they burn in the lamps there? The best sperm oil.
995. Do you think there would be any difficulty in the Government of Victoria forwarding the supplies to any lights at Wilson's Promontory? Certainly not, if we keep our own steamer, but I would not trust to sailing vessels.
996. Considering the large amount of traffic by steam ships that there is between here and Sydney, would there be any difficulty in keeping up a communication with the promontory lights? No.
997. Cape Otway is already provided for by this Colony? Yes, and paid for out of this revenue.
998. Would it be desirable that this Colony should undertake the supply of the Cape Northumberland lighthouse? No; it is too far distant from the centre of Government, and I think it would be approachable overland from one of the South Australian ports.
999. And that is in the territory of South Australia? Yes.
1000. How would you propose that the lights on King's Island should be supplied, bearing in mind that it is in the Van Diemen's Land territory? By the Van Diemen's Land Government consenting to the Government of Victoria having the management of the light; but I do not think we could do it better than they.
1001. Are there not greater facilities for supplying the stores from this Colony than from the north end of Tasmania? Yes, we have greater facilities, but my opinion is, that if the Van Diemen's Land Government would take charge of the light they should do so.
1002. Is not King's Island more accessible from Victoria than from Van Diemen's Land? Much more so, and if a casualty did arise, there would be many ways of communicating with Victoria, by signalling and so on, more than with Van Diemen's Land, for the ships that would sight King's Island coming to Port Phillip would be as twenty to one in comparison with those that were going to Van Diemen's Land.
1003. Supposing an arrangement were come to for laying down a line of telegraphic wires from Port Phillip to Van Diemen's Land, through King's Island, would they not have an opportunity of communicating with Van Diemen's Land? Yes; but the relief would be quicker, I think, from here than from Van Diemen's Land.
1004. In the case of the wreck of the "City of Melbourne," was not Launceston the first port they communicated with, although the steamer belonged to this port? Yes; but that was on the very opposite side of the island to where the lighthouse would be; and they could get a boat easily to Circular Head. There is no doubt that those who will benefit most by a light at King's Island would be the vessels going to Sydney. A vessel going to Sydney would run down in mid-channel, whereas in coming here they keep the main-land aboard. The only two occasions I went in sight of King's Island upon an over-sea voyage were when I was bound to Sydney.
1005. Are there any good sailing instructions for the entrance of Bass's Straits published? I am not aware of any containing any wrong information; they are just those that were drawn up by Flinders.
1006. Do you remember whether there is any strong advice to vessels not to borrow on King's Island in them? I think there is sufficient in them upon that subject.
1007. Would it not be very necessary to warn strangers that a light put on King's Island was not put there for them to steer by? I think that should be very clearly stated.
1008. Have you any suggestions to make to the Commission on the subject of the great highway lights? No more than to refer the Commission to the correspondence I have had with the Government upon the subject of these and other lights during the last four years. King's Island light has been talked of for fourteen years, and every now and then the public have been startled by the loss of vessels and lives, and then then the question is revived. I certainly think that a light should be erected without loss of time either on King's Island or on the New Year Islands.
1009. You have stated it as your opinion that if a light had existed on some part of King's Island some of the wrecks which have taken place might have been avoided? Yes; had there been a light there the facilities would have been so great to traffic that the advantages would have been immense compared with the small expenditure, and there ought to be no time lost in erecting it. I would observe that all the new lights about to be erected should be catadioptric lights, and be all of the same kind, and under one management, if possible.
1010. The light on Cape Otway is a revolving light, is it not? Yes.
1011. What kind of light would you recommend to be placed on King's Island? I think there should be two fixed lights there. My reason is, that the Cape Otway light has a triangular frame with the usual revolving apparatus, and one of the instructions to the keeper is, that in the event of the machinery going wrong he is to stop the light and make it a fixed light and that has been done once or twice; I think the consequence would be so terrible if that happened, and if there were two fixed lights, one at Cape Otway and one on King's Island, and a man mistook the one for the other, that in order to avoid that, the King's Island light should be a double light, to prevent all doubt; I think that with a revolving light so distant from head quarters as Cape Otway, and not frequently looked at by the engineer, it is likely to be stopped, therefore, I think the light at King's Island ought to be of so definite a character that there should be no doubt about it; it is a light that a man will suddenly see when he does not expect to find a light, and the character of it should be so clearly defined that a man should not be left in doubt whether it was Cape Otway light or not.
1012. Is there any other kind of light that would assume a more startling appearance than two fixed lights? No; I think the distinction between the revolving and the intermittent light is not sufficiently great.
1013. What kind of a light would you recommend at Cape Schanck? A catadioptric flashing light of the best construction.
- 1014.

C. Ferguson,  
Esq.  
7 Aug., 1855.

- C. Ferguson,  
1851.  
7 Aug., 1856.
1014. What distinguishing mark would you make between the two lights to be erected at Wilson's Promontory? If there is only to be one it should be a first class catadioptric fixed light; if you have two lights, one must necessarily be fixed, and there should be the greatest distinction you could get between the other and the Kent's Group light.
1015. The light on the western side of Wilson's Promontory you would have a first class fixed light? Yes.
1016. Then what would you have on the Seal Rock? A flashing light on the southernmost of the Seal Rocks.
1017. You think a light at Cape Northumberland would be more easily managed by the Adelaide Government than by this Government? Yes; it is a distance of nearly 300 miles from us, and it is within something like 40 miles of a port in South Australia; moreover, each Government should manage their own lights.
1018. Have you any further suggestions to offer to the Commission? I have not. (*The Witness withdrew*)

Mr. James Lawrence examined:—

- Mr. J.  
Lawrence.  
7 Aug., 1856.
1019. You are a merchant in this town? Yes.
1020. You formerly commanded the "Burra Burra"? Yes.
1021. Trading between where? Between Adelaide and Melbourne.
1022. How long were you in command of that vessel? Twelve months.
1023. And during that time you traded entirely between those two ports? Yes.
1024. Then you have had ample opportunity of ascertaining whether any difficulties exist in reference to the want of lights on portions of the coast you have passed? Yes.
1025. Will you point out the points on which you think it absolutely necessary that lights should be erected? Cape Northumberland, I think, of all other parts of the coast is the most important point to be lighted, not only for vessels from Adelaide, but for all vessels from Europe and coming from the westward.
1026. You think that is the point on which it is most expedient a light should be erected? Yes, not only for coasting vessels, but for over-sea vessels. In fact, a light there is more desirable, I should say, than on King's Island.
1027. You are aware that some vessels have been wrecked in the neighbourhood of Cape Northumberland? Yes.
1028. Have those wrecks been frequent? They have been frequent, and might have been all avoided if there had been a light. All the wrecks have taken place in the dark, and nearly all within the range of a light.
1029. And you think if a light had been erected there some, if not all, of those vessels would have been saved? I believe they all would have been saved. The "Varoon" is the only one that was out of the range of a light, and she might have seen a light before she went on shore.
1030. Have you been close to the point? I have. Before I commanded the "Burra Burra," I had a little steamer of my own, which was chartered by the underwriters to save the cargo and wreck of the "Nene Valley."
1031. Your vessel was chartered to go down to the wreck of that vessel to save property? Yes.
1032. What was the result of that? The result was most unfortunate, certainly. In order to save all that we possibly could, we anchored inside the reef at night within range of a light, had there been one there. During the night a gale sprung up upon us, and if we had had a light to guide us we could have come out with safety; that not being the case, we were unfortunately wrecked in trying to come out.
1033. A light would have been a sufficient guide to have enabled you to go clear of the land? Distinctly so.
1034. Do you think that if that point were lighted there would be a sufficiency of lights on that coast with those already in existence? I should think so. The principal reason why a light should be put there, is that the coast is rather low there for fifty miles on each side of it, and it is very deceiving. It juts with that sort of prominency into the southern ocean that the prevailing winds from the south and west strike upon the corner and send the current at right angles with it, and if there was a light upon Cape Northumberland it would show vessels where they were.
1035. Is it your opinion that there is any necessity for a light between Cape Northumberland and Kangaroo Island? I should say not an immediate necessity, because it is like crossing a bay.
1036. Between Cape Northumberland and Cape Otway are there any points that ought to be lighted? I should say that a light on the Lawrence Rocks, in the neighbourhood of Portland, would be of great service.
1037. Would not that partake more of the character of a harbour light? Probably it might be partially a harbour light, but if there were a light there it would be of great service. A light on the Lawrence Rocks would do double service; it would enable vessels in dark stormy nights to pick up Portland Bay, and to vessels passing in that neighbourhood it would answer the same purpose as if placed on Cape Nelson or Cape Northumberland.
1038. In passing out of Port Phillip or coming from South Australia to Melbourne, have you found the want of any light in the immediate neighbourhood of the Port of Melbourne? I have felt the want of a good light at Port Phillip Heads. It is a wretched light there; it is only like a pier light. You can only see it eight miles outside the Heads instead of twenty miles. I have repeatedly felt the want of a light there in thick weather or boisterous weather of any kind. You cannot see the light there until you are quite down upon the Heads. The bluff overlooks the Heads, and to a stranger it is very deceiving.



1039. Have you ever considered whether any light is wanting on the Schanck? I think not. The Schanck is a piece of land that is very prominent, and no stranger could mistake it.

1040. Would not a light on the Schanck give confidence to vessels approaching Port Phillip Heads? Most distinctly.

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1041. In standing round from the westward—in coming round from Adelaide, if you knew there was a powerful light on the Schanck, would you not run with the greater confidence to get a cross bearing of that light than you can now, having only an indifferent light at the Heads? Undoubtedly so, but still I should say if there was a powerful light on Shortland's Bluff there would be no occasion for a Schanck light.

1042. Have you ever observed in standing in, when you have been over to the north-east side of the bay, whether that light was shut in altogether? It is shut in far to the southward.

1043. Is it not shut in until you can bring it to bear something like north half east? Yes; it ought to be seen over Point Nepean coming down from Cape Otway. We have to open it about north half east before we can see the light.

1044. You are aware there is a double light there? There is a leading light. I am speaking with reference to the lighthouse, not with reference to the leading light.

1045. Is there not a disadvantage if you make use of two lights as a leading light in having one light very much above the other? Not at all. If you pick up the upper light you can always get hold of the other.

1046. If the upper light was very much elevated above the lower light, would it not cease to have the effect of a leading light for the purposes for which it is intended? Not by any means. The first thing is to see the light, then, when you know that is the light, you know very well there is a second light. When you pick the first light up you are in a position to have the ship in good command, and when you see the second light you can put the ship in good position.

1047. You would rather improve the light on Shortland's Bluff in preference to erecting a light upon the Schanck? I should say so.

1048. You only allude to the case of a vessel coming from the westward. To a vessel coming from the eastward would not the Schanck light be of importance? Seven-eighths of the vessels coming from the eastward are coasters, and they all know the course they have to steer; but strangers coming from the westward are much more at a loss in picking up the heads.

1049. But if a stranger knew there was a powerful first-class light on Cape Schanck that would give him great confidence in making the heads, and he would borrow on that shore even in thick weather, would he not? No doubt he might; but with strangers I think it would be apt to mislead them; they might take the Schanck light for Port Phillip light unless there was some marked distinction in the character of the light.

1050. Have you had any opportunity of judging of the advantage or disadvantage of placing a light upon King's Island? I should say that a light upon King's Island would be a great desideratum, on the same principle that I speak of the Port Phillip Heads lights, picking up King's Island, would enable vessels to be guided into the straits.

1051. Are you aware that a nasty reef lies off the north of the island? Yes, I have seen it, and I should not like to see it again under the same circumstances.

1052. Do you think that a light there would be at all likely to lead a vessel into that danger, or would it enable her to get clear of it? I should say that it would enable a vessel seeing the light to have more confidence. Supposing she had been in a storm and received damage, I should say if a light was there it would enable the commander to have more confidence either to put his vessel in a position to save the lives of his crew or to run clear of the reefs.

1053. In placing that light can you at all give an opinion as to whether it should be upon King's Island or upon one of the adjoining islands. Are you acquainted with King's Island? Not particularly.

1054. Have you considered the subject as to where a light should be placed, supposing one was placed there at all? I have passed within a very short distance of the Harbinger Rocks, and I should say a light upon Point Wickham would be of great service.

1055. Do you think that would be preferable to placing it on the New Year Islands? Decidedly so.

1056. You are decidedly of opinion that Cape Wickham would be the best place where to put a light? Most distinctly.

1057. And you are decidedly of opinion that it would be beneficial to navigation that a light should be placed there? Yes, and a lighthouse at Cape Northumberland would be very desirable. The course from Cape Otway to Cape Nelson is west and by north, and from there to Cape Northumberland about west-north-west, and then the coast tends about north-north-west half west, and I consider Cape Northumberland to be the great turning point upon the west side of Australia as Cape Howe is on the east, and I think it ought to be lighted.

1058. Would that light be of assistance to the large ocean steam vessels coming up with the mails? Yes, the utmost importance.

1059. Do you think there would be any difficulty in erecting a lighthouse on Cape Northumberland? Not the slightest; there is plenty of timber, stone, and lime there.

1060. Is there any shelter for a small vessel there? Very little shelter; but it could be supplied from Rivoli Bay, which is about forty-five miles from Cape Northumberland.

1061. Then you think there would be no difficulty in erecting a lighthouse or supplying it from Rivoli Bay? Not the slightest. The "Nene Valley," the "Young Australian" steamer, the "Iron Age," the "Varoon," and two other vessels have been lost within ten miles on each side of Cape Northumberland within the last two years, and the "Varoon" was lost with every soul on board.

1062. Is there any particular set of the current in entering Bass's Straits from the westward, between Cape Otway and King's Island? There is a current running from the westward.

- Mr. J. Lawrence. 1063. Is there any southerly set between Cape Otway and King's Island? I think there must be, but I do not know it from experience. The "Young Australian" steamer was my own; and when I went down to save the wreck of a vessel at Cape Northumberland, I had to make several trips round to Portland for shelter, and I have coasted close along the beach as near as the breakers would allow, and I am sure if the light had been erected at Cape Northumberland it would have saved these ships.
- 7 Aug., 1856. 1064. If there were a light at Cape Northumberland you would not consider any other light necessary between there and Cape Otway for the over-sea trade? No; Cape Bridgewater is high land, and you can see it some fifteen miles off, but Cape Northumberland is a nasty, low, rocky coast.
1065. Are you familiar with the coast to the eastward of Port Phillip? No; I have been from Wilson's Promontory to Sealer's Cove, but I do not profess to know much about that part of the coast. [*The Witness withdrew.*]
- Adjourned to to-morrow at ten o'clock.

FRIDAY, 8 AUGUST, 1856.

Present:—

CAPTAIN KAY, R.N. | MR. BROWNE.

Crawford Pasco, Esq., R.N., examined:—

- C. Pasco, Esq. 1066. You are Water Police Magistrate of the Colony of Victoria? Yes.
- 8 Aug., 1856. 1067. Were you employed in H.M.S. "Beagle" in surveying this coast? Yes, I was specially detached from the "Beagle" for the survey of Bass's Straits.
1068. A great portion of the survey of Bass's Straits was conducted under your superintendence, was it not? I assisted Mr. (now Commander) Forsyth, who was my superior, and conducted this portion of the survey.
1069. Do you know the east coast of New South Wales also, from Sydney downwards? Partially; merely by having made passages between this and Sydney. I was not engaged in the survey of that coast.
1070. Perhaps from your passages up and down the coast you will be able to give the Commission your opinion as to whether you consider that there should be any additional light on that coast between Sydney Heads and Cape Howe? It occurred to me in the last trip I made that a light would be desirable on Cape George.
1071. That is the southern entrance of Jervis's Bay? Yes; Point Perpendicular I think is too elevated for a light.
1072. Are you aware that vessels experience a considerable indraught or setting to the southward so as frequently to bring them considerably to the westward of the course which they anticipate making, and that sometimes in consequence get into Wreck Bay and are lost? I am not aware of that fact.
1073. Supposing a light to be erected on Cape George, would you then consider that the coast between Port Jackson and Cape Howe was well lighted? I should think it sufficiently lighted. As the resources of different localities become developed it may eventually become necessary to have harbour lights.
1074. But speaking of the great highway lights, you think that then the coast between those points will be well lighted? Yes, sufficiently.
1075. Have you had opportunities of observing the light on the Howe since it has been erected? No; I have never seen that light.
1076. From its position do you think that it is beneficial to navigation? Decidedly. I had understood from one shipmaster in the trade that it was not a good light; but from others I have understood that it is an excellent light, and they approach it with confidence. I have never seen it myself.
1077. Was the light on Gabo Island originally suggested by Captain Stokes? I am not aware of that.
1078. It was not suggested at the time you were with him in the "Beagle"? I am not aware; Captain Stokes was in the vicinity of Cape Howe in the "Beagle" at the time that I was detached from her.
1079. In proceeding to the westward what is the next point at which you think it would be desirable that a light should be established? I think a light is necessary for vessels rounding Wilson's Promontory.
1080. In the course of your surveys did you ever land on Wilson's Promontory? Not on the extremity of the promontory. I have landed at Corner Inlet.
1081. Have you ever had an opportunity of judging of the geological features of the cape itself? I have been very close to it, and it appears to be all granite boulders.
1082. As it must be very evident that the placing of a light on Wilson's Promontory would require that it should be in such a position that vessels could see it in coming both from the east and from the west—is there any spot on the coast which you could suggest as desirable for a light? I should not recommend a light on the promontory itself. The point I have always felt would be most useful for a light would be on the Ten-foot Rock, if it be practicable.
1083. Have you seen the Ten-foot Rock? Yes.
1084. Have you landed on it? I have not.
1085. Do you think it would be practicable to erect a lighthouse there? I think there is ample base for it.
1086. Does it stand above the water to any considerable height? More than ten feet, I think.

1087. Is there not a very heavy sea breaking over it in both easterly and westerly gales? I should think the sea must break over it in heavy gales.
1088. You are not aware as to that from your own observation? No.
1089. Supposing it were not practicable to erect a lighthouse on the Ten-foot Rock, what is the next spot you would suggest? I think Cleft Island; that is an awkward point to pass from the westward, it being so much lower than the promontory.
1090. A light on Cleft Island would only be serviceable to vessels coming from the westward? Vessels coming down from the eastward might avoid the Seal Islands, which lie on the eastern side of the promontory, by shaping a course to open Cleft Island clear of the promontory, checking their position by Kent's Group light and an occasional cast of the lead.
1091. Then you think a light on Cleft Island would afford advantages to vessels coming from the north-east as well as from the westward, because they could shape their course in order to open the light? Yes; I am not sure of the elevation of Cleft Island; I should think it must be seventy feet high.
1092. Do you know whether that island is also of an impracticable character for the erection of a lighthouse? It is also rocky, but I should not say impracticable.
1093. Is it of such a description as that you would be able to land on it? Yes, I think the "Beagle's" boats have landed on it.
1094. And found shelter? Yes, the "Beagle" anchored under the Glennie Islands for some time.
1095. Supposing it were considered desirable to erect two lighthouses for the lighting of the passage round the promontory, what are the positions you would select for those lighthouses—one to the east and the other to the west? I think Clifty Island, the southernmost of the Seal Islands, would be a desirable point for one, for vessels coming down from the north-east, and it would also be serviceable for vessels approaching Port Albert.
1096. It it could be carried out, you would suggest the propriety of two lights, if the Ten-foot Rock should be found to be impracticable for the erection of a lighthouse? Yes.
1097. If a lighthouse could be erected on the Ten-foot Rock would that answer the purpose of the two lights? I should say not, unless the light could be sufficiently elevated to be visible from the Seal Islands, which being a distance of seven leagues should be at least 200 feet above the sea.
1098. Would not a vessel knowing there was a light upon the Ten-foot Rock be enabled to keep clear of the Seal Islands? I think they might by shaping a course to sight Kent's Group light and then making for the Ten-foot Rock.
1099. Are you of opinion that there is no one spot upon the promontory upon which a lighthouse could be erected which would be available for the purposes of navigation both ways? I do not remember to have noticed such available spot, but the importance of the question is worthy an examination of the locality before deciding; keeping in view the danger which exists in Cleft Island being obscured under the high land of the promontory.
1100. If only one light were decided on to be carried out at present at the promontory, which would you suggest as being the most useful site for it? I should say the Ten-foot Rock, if practicable, otherwise the Cleft Island.
1101. And you believe the Cleft Island to be accessible and of sufficient base for a lighthouse? Yes, ample base.
1102. Do you know the Rodondo? Yes.
1103. Is it practicable to put a light upon it? No; it is inaccessible, and its altitude would be too great. The great objection to the light at Kent's Group is that it is so elevated as to be frequently obscured.
1104. What is the passage usually taken by large sailing ships, proceeding either east or west through Bass's Straits in that particular part, do they hug the promontory or not? No; I think they all make for the centre of the straits and keep to the southward of Curtis's Island, in consequence of the Kent's Group light. Before there was a light at Kent's Group that was the beaten track between Curtis's Island and Kent's Group.
1105. Supposing a light was placed at the promontory would a prudent master of a large ship coming from the westward proceeding to New South Wales be likely to make use of the promontory passage in preference to the other? I think so; there is ample room, and having a light for his guide he would make for the light.
1106. Because the channel although narrow is clear and free of danger? The light could be approached very close, and there is a distance of nearly five miles between the rock and the promontory.
1107. All the large ocean steamers would use the passage round the promontory, would they not? I see no objection to their doing so when lighted.
1108. And do at the present time, do they not? The "Great Britain" did so, I think.
1109. Therefore it would be very desirable for them that lights should be placed there? I think if lights were elsewhere that passage would be used, because masters of steamers, however large they are, always make the shortest turnings they can, and if the lights were elsewhere I think they would still endeavour to shave the promontory.
1110. The Commission may understand your evidence to be, that supposing the engineering difficulties are insuperable in putting a light on the Ten-foot Rock, you think it desirable that there should be one light placed on Cleft Island and the other on Clifty Island? Yes.
1111. Do you think that the lighting of Seal Island would be sufficiently important to justify the imposing of a tax on shipping navigating the straits, in order to maintain those lights? I think any master navigating the straits would be only too happy to pay for those lights if they were erected.
1112. Is shelter to be obtained for a vessel taking down supplies for those lights? Yes, anywhere, and in case of a westerly gale, which is the most to be dreaded, supposing there to be a light on Cleft Island, there is Glennie Island close by within five miles, and there is shelter

C. Pasco,  
Esq.

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- C. STOKES,  
Esq.
- 5 Aug., 1836.
- shelter under Glennie Island; and then on the eastern side of the promontory there is anchorage in Waterloo Bay and Refuge Cove.
1113. What shelter would there be for a vessel with an easterly gale? I have never anchored in either of these places, but Captain Stokes describes Refuge Cove as being capable of affording shelter from easterly winds, and that the anchorage is not good under Glennie Island.
1114. Then there is good anchorage for any weather either easterly or westerly? Yes.
1115. Would the fact of a light being placed upon Clifty Island be likely to lead a stranger into such a position as that he might be awkwardly placed with the Ninety-mile Beach in case of a gale of wind coming suddenly on from the eastward, he having gone into that bight to look for the light? That might be the case, but, I think, from the distance at which the light might be made he need not approach it. If he was in the parallel of Clifty Island by the time he would make the light he would have ample sea room to haul off.
1116. Are you aware of there being any set of current along that line of coast in any particular direction? No. I think the arrows on Captain Stokes's chart are correctly laid down.
1117. Do you find the current running according to the strength of the wind? There is a regular ebb and flow of tide through the straits, but its force is affected by the prevailing wind.
1118. Is there any considerable rise and fall? No; it is very trifling.
1119. Is the rise and fall on the northern shore of Bass's Straits trifling throughout? It is in the open straits. It varies in the ports.
1120. Taking it on the southern side, the Tamar rises and falls very considerably, does it not? Yes, but in the straits the rise and fall is pretty uniform.
1121. On the north coast of Tasmania there is not a very great rise and fall, is there? No.
1122. Do you imagine that if the Ninety-mile Beach were well surveyed, and the soundings laid down, that would almost obviate the necessity for a light at Wilson's Promontory? I think it would tend to diminish it.
1123. Do you know whether the ground in Bass's Straits varies sufficiently to enable a master of a ship to know whether he is to the north or to the south of the position which he contemplates? I think so.
1124. Have you been off the Ninety-mile Beach; are you familiar with it? No, only towards the east end of it.
1125. Do the soundings, so far as you know, gradually diminish as you approach the land? I never had any soundings in that part.
1126. Do you consider that the position of the light on Kent's Group is good? No, I think it is too elevated to be so useful as a light should be.
1127. Is there any other position in which it could have been placed except being so elevated as it is, that would have been useful as a light to be seen all round the compass? It has an immense radius.
1128. Proceeding towards Port Phillip what is the next point that you think deserves attention on the part of the Colonial Governments with a view to lighting the coast? From the present position of the light at the entrance of Port Phillip Harbour, it being in at Shortland's Bluff, a light on Cape Schanck is often found necessary to show vessels their position.
1129. A cross bearing from the light on Cape Schanck would enable vessels to approach the heads with confidence? Yes; but if the light instead of being at Shortland's Bluff were at the point of Lonsdale Reef a light at Cape Schanck would not be necessary.
1130. Then would you recommend the Shortland's Bluff high light to be shifted to Point Lonsdale? Yes.
1131. Are the Shortland's Bluff lights ever hidden by Point Lonsdale? The point is too low to hide them; but a vessel to the eastward of the entrance at night would not see the light.
1132. Having a light on Cape Schanck would not a vessel get hold of the Cape Schanck light and have greater confidence in standing to the westward until she did open the Shortland's Bluff lights? Certainly.
1133. Would not the Schanck light be an advantage in coming round the promontory, that if there were a light there, and one could not be erected at the promontory, the Schanck light would be a good departure for a vessel? It would.
1134. But generally it would be more useful to vessels coming to Port Phillip than as a great highway light? Yes; I should not call it a highway light.
1135. A vessel getting to the eastward of the entrance to Port Phillip loses sight of the Shortland's Bluff lights, does she not? Yes, by Point Nepean.
1136. Would not that be another reason why the Schanck light would be a valuable one? It would be a valuable position to any vessel between Cape Otway and the port, or to vessels coming from the eastward to Port Phillip.
1137. Would not it give great confidence to a stranger, after making the Otway light to feel that he had a light on the Schanck to get hold of? Yes.
1138. Do you know whether vessels in coming from the westward from Europe bound to New South Wales usually use the straits, or whether they generally come round Van Diemen's Land? They invariably come through Bass's Straits, unless in the summer season, when the easterly winds hinder them.
1139. Have you ever landed on Cape Otway? Never.
1140. Have you seen the light there? Yes; and it is a very good light.
1141. In proceeding to the westward from Cape Otway, what is the next point on the coast that has attracted your attention as requiring to be lighted? I think Cape Nelson. I do not think there is anything between the Otway and the Backstairs Passage that is desirable except that.
1142. Does not the land run more to the northward after rounding Cape Northumberland, which would make it more advisable for a highway light to be placed at Cape Northumberland than

than at Cape Nelson? A light at Cape Nelson would serve the double purpose of a highway and of a light into Portland.

1143. Cape Northumberland is a low sandy point, whereas Cape Nelson and Cape Bridgewater are high bold headlands? I have never seen Cape Northumberland.

1144. It has been given in evidence that all the vessels lost on that coast within the last few years have been lost within the radius of a light from Cape Northumberland? I have never seen the coast at Cape Northumberland, but if it is a low coast I think a light would be better there than at Cape Nelson.

1145. Have you seen Cape Nelson or Cape Bridgewater? Yes, both of them.

1146. Are they bold rocky headlands? They are.

1147. Then if Cape Northumberland is in such a low point, as it appears from the evidence to be, you think a light would be more advantageous there? Yes.

1148. And the land trends away to the north north-west directly you are round it? Yes.

1149. You are not acquainted with the coast much beyond Cape Northumberland? No.

1150. With regard to the great debatable point of a King's Island light—what is your opinion respecting that, speaking with regard to vessels coming from the westward more particularly in the first instance? I think that for vessels coming from the westward a light being already on Cape Otway it is unnecessary to have a light at King's Island; I think if there were a light on Cape Wickham vessels might be induced to shape a course for it, and in thick weather be led into danger by the Harbingers, whereas having a light on Cape Otway, which can be approached with confidence, they would make for it and avoid danger.

1151. Have you ever considered whether a light upon the New Year Islands would be preferable to a light on Cape Wickham? I think the same objection would stand good in that case, particularly with westerly gales prevailing. If a vessel made for the New Year Islands she might be driven into the north-west corner of the island before she could have a chance of working off; I think vessels invariably should make for the Otway light.

1152. In case of a light being put upon King's Island, would it not be very desirable to give a very positive sailing instruction that ships are not, under any circumstances, to borrow upon King's Island, that the light is not put there to induce them to make it, but only to warn them of their danger if they are caught there? That should be very distinctly put forth.

1153. Do you know whether any sailing instructions for Bass's Straits lay any stress upon the point of not borrowing upon King's Island? I rather think they do.

1154. You think a light upon the New Year Islands would be more prejudicial than a light upon the North Cape? Yes.

1155. And you are also of opinion that a light there is unnecessary? I think so.

1156. Do you think that a light if placed upon King's Island would be any advantage to vessels coming from the westward, working out of the straits? Working to the westward, a light on Cape Wickham would be advantageous.

1157. Have you at all made yourself acquainted with the positions of the wrecks that took place last year and the year before on King's Island? Yes.

1158. Do you think if there had been a light there it would have saved either of those vessels? They were wrecked, I think, on the east side, more to the southward.

1159. The great number of wrecks have been on the west side? I am not aware of the circumstances of those wrecks having been investigated, in order to show that if there had been a light it would have been used.

1160. But might it not be put upon the charts at the same time that the light was marked that vessels were cautioned not to approach the island? If they are so cautioned, and observe that caution, they need not come within ten miles of the light—with a strong caution that on sighting the light they should avoid it and not think of borrowing on it, I do not think there would be so much danger.

1161. Might it not be marked on the charts by order of the hydrographer that ships are especially cautioned not to borrow on King's Island? As a general rule I think where lights are vessels will make for them, and if there is a place of safe approach to put lights on, it is always preferable to putting them where there are dangers.

1162. Then you would really hold out the only inducement to keep the safe side by making Cape Otway light the only light to the entrance of the straits? Yes; but then a vessel may be so placed that she is upon the King's Island coast when the Otway would not be visible.

1163. Then in case of your so far modifying your opinion, as to think that probably under the circumstances a light ought to be placed on King's Island, would you favour the Commission with your opinion as to where you think it should be placed? I should think on the promontory of Cape Wickham.\*

1864. Were you surveying in the neighbourhood of King's Island? Not at all.

1165. Are you aware whether the island is affected at all by the different states of the atmosphere—whether it is always clouded, or the contrary? No; the only time I was under King's Island was in coming from Europe in 1838; that was in a heavy westerly gale, and it was extremely thick; and on that occasion we made Cape Otway in the morning, to satisfy ourselves of our position, and then stood to the southward and got under King's Island, and it was very thickly enveloped in mist.

\*I have more maturely considered the question of the propriety of a light being established on King's Island, although, at first, I was in favour of no light on that point, for the reasons I then assigned, viz.—that there being already a good one on Cape Otway, ships would endeavour to make it, and thereby avoid the dangers which exist in the vicinity of King's Island. However, on reflection, I think that vessels may often be driven, when approaching Bass's Straits from the westward, by northerly winds in the neighbourhood of King's Island before they can make sufficient northing to sight Cape Otway, when a light on King's Island would be very serviceable. The site I would prefer for this light would be on Cape Wickham, on such elevation as to be visible over the New Year Islands, but the notice informing the public of the establishing such light should be accompanied by a distinct caution to mariners not to approach the cape at night.—C. P.

- C. Pasco, Esq.  
8 Aug., 1856.
1166. Where were you bound to? Sydney.  
 1167. Was there any light upon Cape Otway then? There was no light.  
 1168. Can you give the Commission any information about the set of the current at the western entrance of Bass's Straits, with reference to direction? I think it is chiefly governed by the wind. In moderate weather the ebb and flow is felt—the flood setting up to the north-east, towards the entrance of Port Phillip.  
 1169. Are you at all aware whether any particular set to the southward has been experienced by ships in approaching the entrance to Bass's Straits? No.  
 1170. Have you frequently entered Bass's Straits from the westward? Three times only.  
 1171. And have you never experienced that southerly set? No.  
 1172. Have you ever landed on King's Island? Never.  
 1173. Are you familiar with the lights in Banks's Straits? I know their positions. I have never seen them lit. I was there when the lighthouse on Goose Island was building, in 1842.  
 1174. Were they erected in those positions chiefly on the recommendation of the survey on which you were employed? I am not aware of Captain Wickham or Captain Stokes having suggested their erection.  
 1175. Are you familiar with the east and south coasts of Tasmania? Not very. My work commenced from the Bay of Fires northward.  
 1176. Then you are not in a position to give any opinion as to the advisability of establishing a light on the eastern coast of Tasmania anywhere? I would not, without experience in that particular part, like to give any decided opinion.  
 1177. Have you any further suggestions to offer to the Commission upon the subject under consideration by them? In the event of a light being established on Cape Wickham I think it may be desirable to exhibit a lower light, to be visible at a distance of three or four leagues in the direction of the Harbinger and Navarino Rocks, in order that vessels approaching either of those dangers may have warning to haul off; such light should not be either red or green, lest it be mistaken for a steamer's side light. I would also suggest for the improvement of the navigation of Bass's Straits, that the soundings in the neighbourhood of the Long Beach and for sixty miles off shore be taken.  
 1178. Supposing the Government were only in a position to erect one lighthouse for the improvement of the trade in Bass's Straits, which do you think should be the one to command superior attention? One in the neighbourhood of Wilson's Promontory.  
 1179. And next to that? As a high road light probably Cape Northumberland; because vessels bound to Port Phillip or New South Wales get up there sometimes with south-east and easterly winds.  
 1180. If a light were placed at Cape Northumberland you would not think it necessary to have one at Cape Nelson or Cape Bridgewater, would you? I think not, unless it became necessary to have a mere local light for Portland Bay.  
 1181. What class of lights would you recommend to be erected if you were establishing any new light—the catoptric, or dioptric, or catadioptric? I am not sufficiently versed with the peculiarities of each of them to say. [*The Witness withdrew.*]

Captain John Brown examined:—

- Captain J. Brown.  
8 Aug., 1856.
1182. You command the "Shalimar"? Yes.  
 1183. How many voyages have you made to these colonies? I have made four voyages here.  
 1184. All of them to Melbourne? Once I went to Adelaide first; I had some passengers for Melbourne but I sent them round by another ship, and then I proceeded from Adelaide through Backstairs Passage and Bass's Straits to Sydney.  
 1185. The other three voyages you made to Melbourne? Yes.  
 1186. In most of your voyages, on entering from the westward have you sighted any part of the south-west coast of Australia before making Cape Otway light? No. Twice before this last time I was in the "Briseis." We had very strong winds outside and the maintopsail went out of bolt ropes; the first land we made was Cape Otway.  
 1187. When bound for Adelaide did you make any part of the west coast of Australia before you made Kangaroo Island? I made nothing until I made Kangaroo Island a point on the starboard bow.  
 1188. In coming round from Adelaide do you think there are any parts of the coast that require lighting? My opinion is, that there is no part of the coast a man requires to sight after leaving Kangaroo Island, where there is a light, until he sights Cape Otway. I sighted the light about eleven o'clock at night, seventy-two hours from Adelaide, I had a running wind the whole of the night.  
 1189. If you had had a beating wind all the way and had had to stand off and on would you have found any particular advantage from having a light on Cape Northumberland? It would have been an advantage then, and it would be an advantage to the coasters; they are not always correct about their position when they have been off the land some time.  
 1190. The course you would steer after rounding Cape Northumberland in coming down from Adelaide or in going from Melbourne to Port Adelaide would be an alteration of some four or five points of the compass, would it not? Yes.  
 1191. It is a considerable elbow to turn? Yes.  
 1192. Have you ever seen Cape Northumberland? Nothing further than seeing it on the chart.  
 1193. You do not know of what character it is? No.  
 1194. In making the straits, do you believe any benefit would be derived by over-sea ships from having a light on any portion of King's Island? I consider it would be a very great advantage to have a light on the New Year Islands.

1195. That is some few miles to the westward of King's Island? Yes.

1196. Why do you consider there would be additional advantages to vessels coming from the westward, in having a light on the New Year Islands instead of on the north end of King's Island? If you were coming from the westward, through the straits, endeavouring to make Cape Otway, and being too far to the southward, you could not make Cape Otway, you could scarcely get through without making one or the other.

1197. Do you think that a light upon the New Year Islands would be sufficiently demonstrative of the position of the shoals off Cape Wickham, to lead you clear of them better than if the light were on Cape Wickham—do you know the position of the Harbinger Rocks? Yes.

1198. You think a light upon the New Year Islands would be a greater advantage to a ship coming from the westward to make that and then haul up to the northward, than if he had to make a light upon Point Wickham, which you think he might not make until he was down upon the reefs? Exactly.

1199. But the distance from the Harbinger Rocks to the New Year Islands is greater than the distance from the Harbingers to Point Wickham—would not a ship be much more likely, therefore, to see a light on Cape Wickham, if she were in danger from the Harbinger Rocks, than she would be to see a light on the New Year Islands—have you ever sighted the New Year Islands? Yes, I sighted them on my last voyage in the "White Star."

1200. Have you considered this subject carefully? Yes; I think the best place for a light would be on the New Year Islands.

1201. Did you not in your last voyage make the land to the southward of King's Island altogether? Yes.

1202. Was that caused by any particular set of the current, or was it caused by prevailing northerly winds? Prevailing northerly winds and the current as well.

1203. You experienced a strong southerly set? Yes.

1204. Are the currents generally governed by the winds? I should say generally they are.

1205. If there had been a light upon the New Year Islands, do you think that would have been any assistance to you in running through the southern passage? No; I should not have attempted to sight that light; I should have endeavoured to have kept sufficiently to the westward of it.

1206. Supposing you had not sighted the land before dark, what course should you have adopted? I should have tacked and stood off to the southward.

1207. You were perfectly confident of your position? Yes.

1208. Had you had observations? Yes.

1209. Did you observe the north end of King's Island, in passing, whether it was clear or hazy? Generally hazy; the only thing you could discover was like bushes or trees standing in the water.

1210. Was the top part of the island clouded? Yes.

1211. The upper part of the land was covered, and you saw the lower part? Yes.

1212. Will you give the Commission, a little more positively, your reasons for preferring the light to be placed at the New Year Islands instead of at Cape Wickham? My principal reason would be, on account of coming down from the westward and those islands lying to the west of Cape Wickham. It would be a very hazy day, or even in the night time it must be very dark, if you could not discover the New Year Islands or Cape Otway; and seeing either the one or the other would be a sufficient guide to escape the reefs.

1213. And you think a light on those islands would be more easily seen than a light upon Mount Wickham? I should certainly say so, because of the elevation.

1214. Do you think you would have a greater elevation on the New Year Islands? I should say so, from what I have seen.

1215. From examination it would appear that that is not the case—the position proposed for the lighthouse at the north end of King's Island is 50 feet higher than the New Year Islands—might it not be possible that a ship in a heavy westerly gale, finding herself caught off the north end of King's Island, might be in such a position with respect to the Harbinger Rocks under her lee, that she might see a light on Point Wickham, when she could not see a light on the New Year Islands? Certainly she might.

1216. Supposing there was a light either on Mount Wickham or on the New Year Islands—if you were coming from Liverpool, would you think of attempting to border upon that island, or would you try to make Cape Otway in preference? I should certainly try to make Cape Otway in preference.

1217. You would not, under any circumstances, think of bordering upon King's Island, even if there was a light there? Not unless the wind compelled me to do so.

1218. Do you think the fact of a light being there might draw a ship into danger, from a stranger not knowing the peculiarity of the coast—knowing there was a light there and trying to make it? My opinion is, that any ship coming from the westward would not attempt to make it, unless the wind compelled her to do so.

1219. The light would actually only be a light to warn from danger, and not a leading light for entering the straits? Yes, that is what I mean.

1220. A ship having unfortunately got into a difficult position, you think it would be a great assistance to her to find there was a light there? Yes; more especially in the night time.

1221. In entering Port Phillip, after rounding Cape Otway, or in coming through the channel you have spoken of as having passed through in your last voyage, does it strike you that any additional light is requisite in the neighbourhood of the entrance to Port Phillip? I do not think there is great occasion for any other light there. No vessel would attempt to run in in the night time.

1222. The coast is sufficiently bold for you to stand in with a view of making the Shortland's Bluff light, and you would stand in there until you made it, and then haul off till the morning? Yes; the first time I came here I came in about ten o'clock at night,

1223.

Captain J.  
Brown.

Aug. 1856.

- Captain J. Brown.
1223. What distance off have you seen the Shortland's Bluff lights? About nine miles.
1224. Can you see both lights from nine to ten miles, in favourable circumstances? You can see them both if it is very clear; but if it is not very clear you can only see the upper one distinctly from nine to ten miles.
1225. Would you have any doubt with the ship you command, in standing straight for Port Phillip Heads, after having got well hold of the Otway light, and standing on—supposing the wind to be a leading one—until you opened the Shortland's Bluff light? I should not hesitate for a moment.
1226. Would you have any additional confidence in consequence of a light being placed on Cape Schanck? Not in the least.
1227. Would not a light placed on Cape Schanck enable you, by a cross bearing, to take your position, which would give you more confidence? Yes; but then I should not attempt to run in so close as all that, to be compelled to take bearings; I should endeavour to stand off; and after I had got a sufficient distance off, lay off and on till it came daylight.
1228. But if a light were on Cape Schanck, would you not be able to stand much closer in and save time? It would not make a difference of more than an hour.
1229. Have you ever considered the question of a light on Point Lonsdale? No, I have not.
1230. You are quite satisfied with the lights on Shortland's Bluff, as being good leading lights? Very good indeed. For my part, as far as I am personally concerned, I would wish for no other than making Cape Otway light, and coming right in.
1231. In passing through to the eastward you went through the straits to Sydney, did not you? Yes; and I have gone home once to England by Banks's Straits.
1232. In passing the promontory, what channel would a large ship take? They go right past Hogan's Island.
1233. That is where Kent's Group lighthouse is? Yes.
1234. If you were bound from Port Phillip to Sydney or England, how would you pass the promontory? I passed close to the promontory.
1235. Between that and the Rodondo? Yes.
1236. And would you do so again if you had to make the passage? I should have no doubt about it at all; it is a safe passage.
1237. Did you pass it in the daytime or at night? In the daytime.
1238. Do you consider it would be any advantage to shipping if a light were erected upon that promontory or is it sufficiently safe to enable a vessel to pass without one? It is so high it is scarcely possible for a vessel to go upon it.
1239. But there are other dangers besides the promontory in the vicinity of it, are there not? The rocks to the eastward of it are very dangerous, and I think a light on one of them would be very desirable.
1240. Did you sight Kent's Group? I saw the light distinctly, and a very fine light it is.
1241. What distance off did you see it? About seventeen or eighteen miles.
1242. It is at a great elevation, is it not? It is, and a very fine light indeed it is.
1243. You think that for a vessel going from the westward through to Sydney or India, or New Zealand, there is no necessity for a light on the promontory? I should not say there was.
1244. You think the navigation is sufficiently safe without it? Yes; Wilson's Promontory is a place that, even on a very dark night, you must keep no look out at all before you could run upon it. I remember that when I sailed out in my command, I lost sight of it.
1245. In proceeding along the coast, you know there is a light upon Gabo Island? Yes.
1246. Do you know the coast of New South Wales, I know it from Twofold Bay; but I would rather decline giving an opinion as to that part of the coast, having been only once along there.
1247. If only one lighthouse were to be erected between Adelaide and Sydney, passing through Bass's Straits, which point or headland would you give the preference to, as being the first light that should be erected? I should say the rocks just to the eastward of Wilson's Promontory.
1248. That you think would be the most important, that is, more important than King's Island or Cape Northumberland? I should say the rocks about the promontory would be the most suitable place for a light.
1249. Supposing a light placed on either Cape Nelson or Cape Bridgewater, do you think that any prudent master of an over-sea ship would attempt to make either of those points in preference to Cape Otway? He might make Cape Nelson.
1250. What advantage would there be in his doing so? Merely to know his position.
1251. Would he not throw himself into an awkward position? No; but still I prefer making the land just to the westward of the Otway light, or sighting the Otway light for the first time.
1252. Have you any further suggestions to make to the Commission? No; there is nothing I would wish to add.
1253. You are not familiar with the south coast of Van Diemen's Land? No; I have been through Cook's Straits to Wellington, New Zealand. [The Witness withdrew.]

Captain John Gover examined:—

- Captain J. Gover.
1254. You are commander of the "Mindora"? Yes.
1255. Where has she arrived from? From Liverpool.
1256. How many voyages may you have made to Melbourne? This is my first.
1257. You have never entered Bass's Straits before? No.
1258. And never been on this coast before? No.
1259. What was the first land you made? I made Cape Otway, in the daytime.

1260.



1260. In arranging for placing your ship in proper position for entering the straits, had you known that there had been a light upon King's Island, would you have thought it advisable to have attempted to make that side of the straits, or would you have considered it more desirable to make the north land? I should have thought it best to make Cape Otway.
1261. From the position of King's Island, forming as it does the south-west entrance to the straits, do you think it would be advisable to place a light there, seeing the position of the Harbinger Reefs? I should.
1262. Where would you suggest a light should be placed, on King's Island or on the New Year Islands, in the immediate neighbourhood? I would suggest that a light should be placed on the New Year Islands, for it is a bold spot.
1263. Do you know that the reefs running off the north end of King's Island are of considerable extent? There ought to be a light there, and one on the New Year Islands as well.
1264. Would not two lights within seven miles of each other be apt to mislead a ship? I would let one be a fixed light, and the other a revolving light.
1265. If you had had hazy weather and no observations, and you were to the southward of the position you anticipated, and you were standing in, fancying you were making to the north side of the straits, and you made this light, and supposing it were a revolving light, the same as Cape Otway, would it not be likely to lead you into danger if either of the two lights at King's Island had the same character as the Cape Otway light? I would not have a light of the same character as the Cape Otway light.
1266. You never sighted King's Island? No, and I did not see Cape Otway. I made the land considerably to the westward of it. The weather was hazy, and I ran into Port Phillip without a pilot.
1267. What wind had you? I had a wind from the westward.
1268. And you made the land somewhere up by Cape Patton? Yes, as near as I can tell.
1269. Then you gave Cape Otway a wide berth, and hauled well round it? Yes.
1270. You have never passed through the straits? No.
1271. And you cannot give the Commission any information as to the navigation of the straits? Not at all.
1272. In coming down from the westward, being bound for Port Phillip, had you ever any intention of making the land before you made Cape Otway? No; I had a fair wind, and I steered a course for Cape Otway.
1273. Do you think that is the spot that all prudent mariners would make for, on entering the straits? Yes, because it is a bold coast. [*The Witness withdrew.*]

Captain J.  
Govea.  
8 Aug., 1856.

Melville G. H. W. Ross, Esq., R.N., examined:—

1274. You are a Commander in the Royal Navy? Yes.
1275. And you are now employed as the Marine Surveyor of Victoria? Yes.
1276. Have you had ample opportunities in the course of your duties of obtaining information respecting the different points at the entrance of Bass's Straits? Yes.
1277. Will you be good enough to give the Commission your opinion as to the necessity, or not, of a light on King's Island? I was sent down with two gentlemen, Mr. Rusden, the Master of the "Electra," and Mr. Burgoyne, in the Public Works Department, I think last September, by order of the late Governor, to fix the site for a lighthouse there. We examined the north end of the island, and also the New Year Islands, and from the position of the Harbingers, as men always like to have lights as near danger as possible, we chose Cape Wickham as the best site for a lighthouse.
1278. Were you unanimous in your opinion? Yes. We had the opinion of a great number of captains of merchant ships before we went down. It was Sir Charles Hotham's wish that we should get all the information we could before we started, and the opinions were so different that we determined we would go and judge for ourselves. The great objection to the New Year Islands that we found was, that vessels coming from the westward cannot see them until they are pretty close in.
1279. They are not sufficiently high to be observed? The highest is only 121 feet.
1280. And you think the islands themselves would be obscured by the land? I think if a light were put upon the New Year Islands it would be attended with great danger, because a vessel running with a strong westerly gale, and with the wind in from the westward, if she missed Cape Otway light, and a light was placed upon the New Year Islands, in running to make that light she would get too far in and get embayed in Franklin Roads, and she could not weather the danger; whereas if she made the light on Cape Wickham, the furthest reef being only four miles from where the proposed site of the lighthouse is, she would have time to haul up and clear the reefs.
1281. If she were embayed in Franklin Roads she could not clear the land on either tack? No; there is a tremendous sea running in there.
1282. Have you satisfied yourself that the reefs lying to the north-west of King's Island do not extend beyond four miles? Yes.
1283. And you are satisfied that there is no detached passage beyond them? We did not go round them, but from what we could see from the proposed site of the lighthouse I think there are no dangers outside.
1284. Do you think in ordinary circumstances a light on the site on which you propose to place it could be seen in sufficient time to prevent a vessel running on the danger? Certainly.
1285. You lived on the island for some time, did you not? We were away from Melbourne about three weeks; we were on the island about a fortnight.
1286. Could you judge during that time whether the island was enveloped in haze at all? That was one subject we paid particular attention to, and during the fortnight we were there we never had two days with the same wind; and during all that time Cape Wickham was always visible.

Melville G.  
H. W. Ross,  
Esq., R.N.  
8 Aug., 1866.

McKillop G.  
H. S. Ross,  
Esq., R.N.

S. A. G., 1856.

1287. From the position in which you propose to erect the lighthouse it would be visible not only from the westward, but from the eastward? Certainly. If a light were placed on the New Year Islands it would be only seen by vessels coming from the westward.
1288. By reference to the chart accompanying your report it appears that a very large number of the vessels that have been wrecked, have been wrecked to the southward of the New Year Islands: did it ever occur to you whether, in consequence of the southerly set having evidently thrown vessels very much more to the southward than they contemplated, a light on Mount Wickham might be of no assistance to a man making the land about the middle of the island, whereas if the light were upon the New Year Islands he would have every probability of seeing it? If the light were on Cape Wickham, where it is proposed to erect it, and at the elevation proposed, vessels would see it nearly all round the coast; a light at Cape Wickham, if of the height recommended, would show over the point just to the southward of the New Year Islands.
1289. You say it would not only be seen over the New Year Islands, but over the cape to the southward of it? Yes; vessels from Van Diemen's Land, coming up the west side of King's Island, would make the light nearly as far south as Freemantle Bay.
1290. Then you think from the positions in which the principal number of vessels have been wrecked, that had a light been erected at Cape Wickham, they would have been warned of their danger, and would have been saved? Yes; every one of those vessels would have been saved.
1291. Would you consider it necessary that any particular description of light, either two or three lights, or any thing of that kind, should be erected? I think one good standing light, of a first-class character, would be what would be required—a light that could be seen twenty-five miles.
1292. You have no doubt in recommending the position which you pointed out last year in your report to the Government, as being the best position? Certainly not; and I consider the light on Cape Wickham would be a very great boon to the mariner, both coming from the eastward and from the westward.
1293. You do not think that a light being placed on King's Island would entice mariners coming from the eastward or westward to border upon that island when they ought to border upon the bold shore? Certainly not; no seaman would make for a light at King's Island instead of the light at Cape Otway.
1294. You think that it should merely be a light to warn a man of his danger, and not for him to steer for? Yes; seeing that light would show him his position, and if he was in mid-channel, if the light was visible twenty-five miles off, he would see the two lights.
1295. Supposing a light was erected at Point Wickham, would not it be a very good thing to make it a point in the sailing directions for strangers that they never should borrow on King's Island, although a light was there? Certainly.
1296. It would be perfectly competent for the Governments of these Colonies to ask the hydrographer of the Admiralty to have such a notice put upon the charts? Certainly.
1297. And with such a notice there could be no excuse for a man looking for the light on King's Island, unless he was driven there by stress of weather? Certainly.
1298. Do you anticipate any difficulty in carrying out the erection of a lighthouse there, if it is decided to be erected on Cape Wickham? Not the slightest. There is a splendid quarry of compact basalt close to it, and plenty of water, and the only thing that would be required would be the timber and lime.
1299. Would it be difficult to land that there? No, I think not. There is a little cove there where the timber might be landed, if a fine day were picked out for it.
1300. Would there not be a perpendicular cliff there to drag it up? No; there is a slope there.
1301. Could that be used for landing stores as well? I would not recommend it, I should say land the stores at Whistler's Point.
1302. Would it be absolutely necessary to go to the expense of making an expensive road between Whistler's Point and the lighthouse before the communication could be carried on? I do not think it would require a great deal of expense to make a road; you would only have to cut down a few trees. It is over a hard sandy soil.
1303. What is the distance? About twelve miles.
1304. Are you to be understood to say that if a light were put upon Point Wickham, at the site selected by the Board of which you were a member, it would be visible over the projecting cape which lies south of the New Year Islands? Certainly, if erected of the height we have recommended. That point of land is not very high, and from the elevation of the lighthouse I have no doubt you could see all down the coast.
1305. Has it struck you that there is any necessity for any additional lights at Port Phillip Heads besides those at Shortland's Bluff? The present lights are quite sufficient, but there might be a great improvement made in them. I think for a place like Port Phillip a light ought to be seen much further than the present Shortland's Bluff lights show; the high light ought to be seen at least twenty-five miles. From the westward I do not think I have ever seen that light above fifteen or sixteen miles on a very clear night.
1306. What course would you recommend with regard to that light? I would recommend a new light being erected at the back of the present light.
1307. On the same bearing? Yes, at the back of the present one; and then when the new lighthouse was completed and the lantern was fixed the old one might be removed, so that no obstruction should take place.
1308. You would still have two lights? Yes.
1309. You say the position of the present lights is very good, but the quality of the lights is bad? Yes and they are not sufficiently high. I would have both of them higher, and I would have the upper light at a greater altitude from the lower than it is at present. There would be another advantage also from that, because now if you are coming from the eastward the

1310. Have you ever considered whether any considerable advantage would be gained to the navigation if the lights at present existing were left as they are, and an additional light were erected on the Schanck? There is no question that a light on Cape Schanck would be very useful, but as far as being of any use to Port Phillip is concerned, it should be of no use whatever.

1311. If the present lights were raised to be seen a sufficient distance off from there would be any benefit to the heads? I do not see that a Schanck light would be of any use to a vessel coming from the westward after having made Cape Otway, because they cannot possibly require it unless they are blown off the land.

1312. It is only eighteen miles from Point Lonsdale to the Schanck? About that. A ship running down from the westward always keeps the land in sight.

1313. But if the wind were from the eastward he would be obliged to stand off, because he would be on a lee shore? There is no doubt that a light at Cape Schanck would be very useful, but I do not see that it would affect the entrance to Port Phillip at all.

1314. To vessels coming from the eastward would not a light at the Schanck be of considerable advantage after leaving the promontory? Yes.

1315. And to all the trade from the opposite coast of Tasmania, would not a light be very useful? Certainly, but vessels coming from Hobart Town generally make the promontory.

1316. But do you think that it is necessary to have a light at the Schanck? I do not think that it is necessary to have a light at the Schanck, but I think that it would be a great benefit to the trade.

1317. A light on the Schanck would be a great benefit to the trade? Certainly, there is no question about that, but I think there are lights to be looked for before Cape Schanck.

1318. Have you ever been in the neighbourhood of Wilson's Promontory? I have surveyed all Corner Inlet.

1319. Have you a pretty thorough knowledge of the promontory? Yes, it was my duty to do so.

1320. Do you consider that that is a point which requires to be lighted, or is it certainly, for the promontory and King's Island ought to be the first light? I do not see that it is necessary to have a light at that point.

1321. Have you seen the Seal Islands, lying off Corner Inlet? I have not seen them.

1322. Are the other islands on the west side? Yes, they are all on the west side.

1323. Have you ever landed on the Ten-foot Rock? I should think it is a large enough for the base of a lighthouse. There are five rocks there; the one in the middle is the largest.

1324. Are you decidedly of opinion that it would not be possible to erect a lighthouse on the Ten-foot Rock? Yes.

1325. If a lighthouse were to be erected in the middle of the Ten-foot Rock, would you prefer it to the lighthouse on the Seal Islands? I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1326. Do you think the lighthouse would be practicable? I think it would be practicable, but I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1327. Is not the lighthouse on the Seal Islands a better one? I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1328. Do you think it would be possible to light the Seal Islands? I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1329. Then you presume there is a base on the top sufficient for a lighthouse? There is no question about it. If the lighthouse were to be erected on the top of the Seal Islands, it would be of no use to a vessel coming from the eastward after leaving the promontory.

1330. Would that be of use to vessels coming from the eastward after leaving the promontory? I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1331. In coming from Corner Inlet you do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory? I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1332. Do you think a light on the Seal Islands would be of any use to a vessel coming from the eastward after leaving the promontory? I do not see that it would be of any use to a vessel coming from the eastward after leaving the promontory.

1333. It would also serve as a guide to Corner Inlet? Yes, it would be of use to a vessel coming from the eastward after leaving the promontory.

1334. Have you ever been on the promontory? I have not been on the promontory.

1335. You do not know what its geological features are, and whether it would furnish some objection to the erection of a lighthouse? I do not know what its geological features are, and whether it would furnish some objection to the erection of a lighthouse.

1336. Have you landed on Cliff Island? No, I have not. The cave is the only place where you could land.

1337. Would there be any shelter for a boat in case of a landing being effected there? Not for a boat to remain there.

1338. Would the promontory itself answer at all as a light? The great objection to the promontory is that to vessels coming from the westward to go through Bass Straits the Glenie Islands and the Cliff Islands would shut the light out—they would not see the promontory light.

1339. If a light were erected upon Cape Schanck would they not have a sufficient departure coming?

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coming from the westward to enable them to go clear of Cleft Island before they opened the light? Vessels leaving Melbourne for Banks's Straits generally steer a course to sight Rodondo, leaving it on the port hand. There is another advantage in the Rodondo, I have seen it on a clear day forty-five miles off.

1240. But on an ordinarily clear night it is always a very distinct feature, is it not? Very distinct.

1341. Then you think that if a light is to be erected in the neighbourhood of the promontory the Rodondo is the most eligible sight for it if it can be satisfactorily placed? Yes; and after the Rodondo Cleft Island, but certainly not on the promontory, not on the main-land.

1342. But if a light were erected on Cleft Island, would you recommend the erection of a second light? Yes; but if a light can be put on the Rodondo there would be no occasion for a second light.

1343. Or if a light could be put on the Ten-foot Rock there would be no occasion for a second light? I do not think you could put a light of sufficient height on the Ten-foot Rock.

1344. The tower would have to be so excessively high, would it? Yes; the light on Shortland's Bluff is 109 feet high, and you cannot see that a sufficient distance. There ought also to be a beacon, I think, on the Crocodile Rock, and I would particularly draw the attention of the Commission to that subject.

1345. How would secure that beacon? I suppose you would secure it the same as all other beacons are secured. There are plenty of beacons on rocks on the coast of England. I am not sufficient of an engineer to say how you would secure it.

1346. Would it not be very difficult to secure a beacon that would stand any length of time, considering the enormous westerly gales you would have there? You would have to watch your time for working, the same as they did in building the lighthouse on the Eddystone.

1347. Have you ever seen the Crocodile Rock? No, I have been near it.

1348. It is under water is it not? You do see the rock sometimes.

1349. The Rodondo appears by the chart to be 1130 feet high? It is very high. Kent's Group is, I think, about 700 or 800 feet high. The height was the great objection to King's Island; it was said that it was always enveloped in mist, but we never saw it enveloped in mist whilst we were there. We all know that every coast in the world is enveloped in fog some time or other in the year.

1350. You think the Rodondo has usually been clear? Yes; I have been there for a twelvemonth, off and on, seeing it every day.

1351. And you never saw it capped? Every coast is liable to fog some time or other, but certainly not the Rodondo more than usual.

1352. What class of lights would you recommend to be adopted in any new lighthouses to be erected in the Colony? I would have lights of the first order on the promontory, King's Island and Cape Northumberland; but for Cape Schanck, being so near to Port Phillip, a light of the second order would be sufficient.

1353. Have you ever had an opportunity of judging of the dioptric light? No.

1354. Do you know whether any estimate was made of the expense of carrying out the erection of the light at King's Island? I think Mr. Burgoyne estimated it at about ten thousand pounds. He was the engineer.

1355. Have you ever been much round to the eastward of Australia? I have been as far as Sydney.

1356. Do you think that coast requires any additional light? We anchored in Twofold Bay, and I think a light would be very useful there for vessels running for refuge.

1357. As a harbour light? Yes. There is a tower built there, and I believe it only requires the light.

1358. You are not acquainted with the coast to the northward of that? No; but I think that as Cape George is the turning point, a light there would be very beneficial, particularly as there is no light between Cape Howe and Sydney.

1359. If that is your opinion with regard to a cape of that nature, do not you think that is more strongly exemplified at the turning point on the west coast by Cape Northumberland? As far as over-sea ships bound to Victoria are concerned I do not see the necessity for that light.

1360. But the ships coming from Adelaide or from India, would not that be advantageous? For vessels coming from Adelaide it would be very beneficial, but vessels from India have no business near Cape Northumberland.

1361. Have you ever been across the straits to any part of Van Diemen's Land? No. I have been up as far as Portland, to the west.

1362. Supposing the Governments of these Colonies decided upon the erection of lights in the neighbourhood of Wilson's promontory, do you think there would be any difficulty in communicating with them? There would be just the same difficulty at all the places proposed; vessels conveying stores and provisions would have to watch for fine weather.

1363. But there are plenty of places for shelter in the neighbourhood of the promontory? Yes; from westerly winds, for instance, Waterloo Bay, Refuge Cove, and Sealer's Cove; but with easterly winds they are open, and there is only Corner Inlet along that coast where a vessel could get shelter with an easterly gale unless she went round the promontory to the westward.

1364. Would the "Victoria" steamer be able to lie in either of those places? Waterloo Bay and Sealer's Cove with westerly winds. Supposing the "Victoria" were sent with provisions or stores to supply the lighthouse, Corner Inlet would be the safest place for her to anchor.

1365. And if the lighthouse were on the promontory itself, it could be communicated with over land, could it not? No, not as regards stores and provisions, they would have to be landed close to the light from seaward.

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1366. If it were determined to erect only one lighthouse, which do you consider the most important one to be erected first? Certainly King's Island. I should give that the preference; because, in the first place, the trade and emigration to these Colonies is very large, and I think you would find all vessels going to Sydney from England generally come that way.

1367. You think King's Island is the most important position? Certainly; and then after that the promontory. Those are the two first lights that, in my own opinion, ought to be put up.

1368. Supposing a light were placed upon the Seal Islands to the east of the promontory, and a stranger coming down from New South Wales had gone in there to look for it, would not a ship be caught in an awkward position, supposing an easterly gale came on suddenly? Yes; if she got to the northward of the islands; but if not she would have ample room to haul up and go round the promontory; and in the daytime she could run for Corner Inlet with perfect safety.

1369. Do you think that the tendency of a light on the Seal Islands would be to draw strangers into that position? Certainly; with an easterly wind.

1370. That is an objection to it? Yes.

1371. Whereas now large vessels always look for the light upon Kent's Group and take that passage? Yes.

1372. The easterly gales come on with great suddenness, do not they? Yes.

1373. And great violence? Yes; there is a tremendous sea about the promontory.

1374. Have you ever seen anything of the Song Beach? No, I never have been near it.

1375. Do not you think if that beach could be surveyed and sounded out it would be a great advantage as having a light upon the island? No; I do not see that vessels coming from the eastward have any business in there.

1376. But do not you think if it were sounded and the entire soundings were known that a man, in thick weather, would know his position by the soundings? Yes, if it were properly sounded and the soundings fixed, as in the English Channel, a man would be able to tell where he was.

1377. Do you think it advisable that a survey should be made of the Ninety-mile Beach? I think it would be desirable; I do not think it is such a frightful place as is generally imagined, no doubt there is always a very heavy swell sets in there with a south-east wind.

1378. Is there any point on the promontory itself on which a lighthouse would answer the purpose of guiding vessels, both from the eastward and from the westward? No; if a light were placed on the promontory it would be seen by vessels coming from the eastward, but it would be shut out from vessels coming from the westward by the Glennie Islands and Cleft Island.

1379. Are they high? Yes.

1380. What height does Cleft Island stand out of the water? I think it is about two hundred and fifty feet.

1381. Are the Glennies higher? They are higher than that now.

1382. Have you examined Wilson's Promontory with reference to the erection of a lighthouse there? Yes; I sent in a report to the Surveyor General, and I recommended its being placed at the Redoubt.

1383. Have you any further suggestions to offer to the Commission? In conclusion, if any lighthouses are to be erected, I would urge the necessity of making King's Island and Wilson's Promontory decidedly the first places at which lighthouses should be erected.

1384. You think they are more important positions than the Schanck? Certainly; I look upon the Schanck as quite a secondary consideration.

1385. Are you aware whether coloured lights are ever used for ocean or over-sea lights? No, I think not. I think they are generally white lights, either flash, revolving, or stationary, or two lights parallel, or two lights vertical.

1386. What kind of light would you suggest to be placed on King's Island, to make it as marked as possible, in contradistinction to Cape Otway light? I would have a fixed light there.

1387. Might not an objection to that arise in the event of the machinery of the light on Cape Otway getting out of order, and that becoming a fixed light, might not something of a still more marked character than a single fixed light be used there? There might be a couple of lights on the same tower, one below the other.

1388. Would not that be open to objection because the upper light would become visible first, and a man might take it for a single light instead of a double one? If the light were of the first order and it could be seen twenty-five miles off on a clear night, they would see the second light when they were within fifteen or sixteen miles, and that would clear them of all dangers.

*The Witness withdrew.*

Captain Charles H. Langley examined.

Captain G. H.  
Langley.

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1389. What ship do you command? The "Annie Wilson."

1390. Where was she last from? From London.

1391. How many voyages has she made here? This is her second voyage.

1392. And both times she has come from England? Yes.

1393. You have of course considered the nature of the entrance of the straits before you put your ship into a position to bring her in; do you consider that the light upon Cape Otway is a sufficient demonstration of the entrance to the straits to prevent any possibility of accident? I think not; I think there should be a light upon King's Island.

1394. In making the straits from the westward where have you usually made the land? At Cape Otway generally.

- Captain C. H. Langley.
- 8 Aug., 1856. 1395. Did you find at any time that the current had set you out of what you contemplated to be your proper position by your reckoning? No, I made the point exactly both times.
1396. If there were a light upon King's Island would you consider it advisable to borrow upon that island, or would you still continue to make the land in the same way as at present? I should prefer to make Cape Otway.
1397. Then what would be the usefulness of a light upon King's Island? Supposing your chronometers were not quite correct, and you were a little further to the eastward than you imagined yourself, you might, in thick weather, make King's Island, and consequently a light upon King's Island differing from that at Cape Otway would of course guide you.
1398. Have you ever considered the subject as to what part of King's Island you would recommend a light to be put on? I should say about the north-west point. I should prefer it upon the New Year Islands, if it were possible to erect it there.
1399. Supposing you were out of your reckoning and made the island to the southward, running with a heavy gale of wind from the westward, what position would your ship be in, in hauling to the northward, with the Harbinger Reefs right a-head of you? If it was a sufficiently good light you could make the light sufficiently far to haul clear to the north-north-west. I can say nothing about the navigation on the east side of the coast.
1400. Then you would not give an unqualified opinion as to the best position for a lighthouse being on the New Year Islands? No, I only spoke as to a ship coming from the westward; from the eastward I know nothing about it. For a ship coming from the westward I should have it on the north-west part of the island.
1401. Then you do not attach great importance to the New Year Islands? I would have it on the north-west part of the island, so that you could see either it or Cape Otway in running in; I should myself prefer the New Year Islands. My opinion is that if a ship was well under command you would have plenty of time if you sighted the light on the New Year Islands to clear the reefs at the Harbinger Rocks.
1402. Have you passed through the straits? I have gone through Banks's Straits.
1403. Are the lights of a good character there? Yes.
1404. Did you see them? I saw the lighthouse at Goose Island when it was just getting dark. The Swan Island light I saw, but it was hazy when I passed through.
1405. Do you think that those straits are sufficiently lighted? I made the Goose Island light just before dark, and I was so quickly through the straits that I had no time to observe the character of the lights.
1406. Do you think the lights at the entrance of Port Phillip are sufficient? Cape Otway light is a very good light.
1407. But coming further up the bay? You can hardly see the Shortland's Bluff lights far enough off. The last time I came in, from what I recollect of them, I should have preferred them to be larger lights, that you could see them a farther distance.
1408. Supposing you had had a light on Cape Shanck at any time when you had been coming in here at night, would it have given you greater confidence? If it was a different light from the other I should think it would.
1409. By a cross bearing would it give you greater confidence? By a cross bearing it certainly would, because if you had even made Cape Otway on running up the current might set you one way or the other, and then with a light on your starboard bow you would feel greater confidence of your position, if it was thick weather or a dark dirty night you might be set a point or two points from your course on the starboard side, and then instead of making Port Phillip Heads you would see a light on your starboard bow and you would immediately haul to the north-west.
1410. Then you think a light on Cape Shanck would be of very great service? Yes, decidedly; because you could pick your position up and stand in boldly at once. The lights upon Shortland's Bluff should be a little more distant—one above another, they are not elevated enough, especially the back light.
1411. In coming down from the westward before you make the coast of New Holland is there any other prominent cape which you think it would be an assistance to over-sea ships to have a light placed upon. As a prudent man commanding a large ship, would you in coming to Port Phillip always try to make the Otway light in preference to anything else? Yes.
1412. Even supposing other lights did exist on the coast to the westward? Yes, I always come up with Cape Otway bearing about east-north-east.
1413. Have you any further suggestions to offer to the Commission? I think it of the utmost importance that a light should be placed on King's Island.
1414. But you are not very much wedded to the opinion whether it should be on the New Year Islands, or the north end of King's Island? On the whole I should prefer the New Year Islands. (*The Witness withdrew.*)

Captain William Bell examined:—

- Capt. W. Bell.
- 8 Aug., 1856. 1415. You command the steamer "Yarra Yarra"? Yes.
1416. Which vessel you have commanded for some years? The "Shamrock," the "Waratah," and the "Yarra Yarra," I have commanded one or other of them for five years.
1417. Previously to that did you command sailing vessels on the coast? Yes, trading between Sydney and Van Diemen's Land, and Van Diemen's Land and this place. I have made 176 voyages from Van Diemen's land here, and 256 in all to this port.
1418. During the time you have been employed in the command of those steamers you have traded between Wide Bay to the north, and Swan River to the west? Yes.
1419. Are you aware that a lighthouse is about to be erected on Moreton Island? Yes.
1420. In coming down to the southward from Moreton Bay, considering that the erection of that lighthouse has already been decided upon, are there any points or positions between  
Moreton

- Moreton Island and Sydney Heads which, in your opinion, ought to be lighted? I should <sup>Capt. W. Bell</sup> almost think none, but if there should be one I would recommend a light on the Solitary Islands. There is no necessity for that except that sometimes we get a little farther off the land than we ought to do. There is another very important point—the Seal Rock Point. <sup>8 Aug., 1856.</sup>
1421. Then if you lighted the Seal Rock Point, you would not light the Solitary Islands, would you? Yes; but there is not a very urgent necessity for either. The most urgent point, I think, of the two, is the Seal Rock Point, to the northward of Port Stephens, because we there alter our course from north-east and by north to north, and we very often go out of our way in order to avoid the rock which lies off Seal Rock Point two or three miles from the land.
1422. From Sydney Heads to Gabo Island, are there any points either for vessels coming to the southward, or going to the northward, which in your opinion ought to be lighted? Yes, there is one very important point; there is a bight in by Cape St George, and another bight into Shoalhaven, and I have known several wrecks occur in Wreck Bay.
1423. Have you found the difficulty of wearing that point, more particularly in standing to the northward than in coming to the southward? Yes.
1424. Have you found that there is a certain indraught there which very frequently obliges you to haul your ship more out than you originally anticipated, when shaping your course from Montague Island? Yes.
1425. On which point would you consider it advisable to place a light; would you place it on Cape St. George, the southern point, or Point Perpendicular, the northern end? I think on Point Perpendicular a light would show both north and south, and would guide you sufficiently clear of the heads. We want a light to get us clear of Point Becroft in coming southward, and in going to the northward we want a light to clear us of Wreck Bay Bight.
1426. Then you think it would be a great consideration for all sailing vessels as well as steamers if a light were erected on Point Perpendicular? Yes. If a lighthouse is put on Cape St. George, unless it is very high, you would not be able to see it coming from the northward, but if on Point Perpendicular you would see it both from the northward and the southward. In coming from the northward a man would have to come right past Point Perpendicular before he could open the light on Cape St. George.
1427. Do you think that an absolutely necessary light to be carried out without delay? Almost as important as Gabo Island; I have often wished that there was such a light there. In dirty thick weather we very often make our distance greater than we otherwise should do.
1428. Is there any other point as a great leading thoroughfare light that you would consider to be necessary between that and Gabo Island? None at all. Should Twofold Bay become important, or even as a place of safety in heavy weather, a light there would be very important to guide vessels to the port.
1429. Then you would advise that a small harbour light should be erected sufficient to guide a vessel into the bay at night? Yes. There are many vessels driven off to New Zealand when if they could get into the bay it would save them making those long voyages, and if there were a light there any stranger could go into that bay night or day.
1430. Have you had ample opportunity of judging of the efficiency of the light on Gabo Island? Yes.
1431. Do you think that light is properly placed? It might have been at the point of the island. It would have been better there.
1432. Which point? The southernmost point, but at the same time it is farther seen where it is now placed.
1433. Where is the light now placed? Upon the north-east side, or nearly in the centre of the island. I think it would have been better placed at the end of the island, so that vessels coming from the northward could see it sooner.
1434. Is it some time before you open the light after passing Cape Howe? Yes; the light can be seen at present about sixteen miles.
1435. You are aware it is only a temporary lighthouse, would you consider it advisable to erect the permanent lighthouse on the southerly point? Yes; and sufficiently high for it to be seen about the same distance as the present one.
1436. In passing along to the westward from Gabo Island where is the next point in your opinion which requires to be lighted? It becomes then a question whether there should be two lights at Wilson's Promontory or whether one only should be erected there.
1437. Would you recommend a light at or in the neighbourhood of Wilson's Promontory? Yes.
1438. Supposing only one light to be erected, where would you consider it advisable to place it? Either on Hogan's Island, which would serve as a light for any vessel coming from the westward, or on Monœur's Island. If on Monœur's Island it would be open to vessels coming from Melbourne or vessels bound to Melbourne round the Howe, but it would do probably greater benefit if two lighthouses were erected.
1439. Where would you recommend the two lighthouses to be placed? If there were two lighthouses I would recommend one to be on Seal Island and one on the Glennies.
1440. Do you consider that some light or lights in that position is absolutely necessary? Quite so.
1441. Would a light upon Cleft Island, or on the Glennies to the west of the promontory, be of any use to vessels coming from Hobart Town, through Banks's Straits, or from Launceston? To vessels coming from Hobart Town it would, because then they would make the lights one after the other. They would pass Goose Island light, and then Kent's Group light, and then they would get hold of the promontory light.
1442. You consider it would be a considerable advantage to the Van Diemen's Land vessels, as well as to vessels coming from Sydney? To the Hobart Town vessels, not so much to the Launceston vessels; because it is only in a contrary wind that they would be obliged to approach the promontory in coming from Launceston.

- Capt. W. Bell. 1443. Have you ever considered, or had an opportunity of judging, whether those islands on which you have suggested that lighthouses should be placed are of such a character that that could be done without any engineering difficulties? I think the greatest difficulty would be with Moncœur's Island. I do not think there would be any difficulty with Hogan's Island.
- 2 Aug., 1850. 1444. Do you think if one light were erected on Moncœur's Island, it would answer all the purposes of both lights? That would be the best position if there were only one; but the most useful course would be to have two. There is a distance between Hogan's Island and Moncœur's Island of about twenty miles; so that we should be more anxious when we were coming up towards Hogan's Group, and the distance would be too great; I consider, that, if there were only one light there, Hogan's Group would be the best place for it, because a man abreast of Hogan's Group, with a light on that group, could steer his course so as to pass clear of all dangers round the promontory. In coming down from the north-east, we could always sight the Hogan's light, although we might not be able to sight the light upon Moncœur until we had approached it very near.
1445. What channel would sailing vessels use in going from the eastward or coming from the westward? Hogan's Island would be the most beneficial one for vessels coming from the westward.
1446. Sailing vessels would keep near Sir Roger Curtis's Island? Yes; and thereby have a channel of fifteen miles to go through clear of all dangers.
1447. But the steamers always use the channel between the Rodondo and the main, do not they? Yes; and I do not see any place more eligible if there is to be only one light than the Hogan's Group. A stranger would prefer the passage between Hogan's Group and Kent's Group to the passage between Kent's Group and Wright Rock. I have seen the Kent's Group light when I have been forty-eight miles off and within 200 yards of the promontory.
1448. In passing from the promontory is there any other point which is not now lighted which you would consider it advisable to light? I think Cape Schanck is a very important point in connection with all the Australian Colonies; I consider a light there so important that I told some gentlemen that if a lighthouse was built there by subscription I would put my name down for £50.
1449. Do you think Cape Schanck light would also be useful for vessels coming down from the westward and rounding the Otway, would they not be able to pick up their position with Cape Schanck light, and so run for the heads sooner than they now do? Yes, coming from the westward you would see Cape Schanck light.
1450. If a man running from the westward could make the Schanck light, he would be able to pick up his position, take a cross bearing, and run straight to any point he liked within a stone-throw of the shore? Yes.
1451. Then, with a light on Cape Schanck and the Shortland's Bluff lights, and the new light on the Spit, a man would be able to come up the bay at any hour of the night? Yes.
1452. Which do you consider the most important, the Schanck light or the promontory light—which would you recommend to be first adopted? As far as I am concerned, speaking only for the trade from Sydney, I would recommend the one in the vicinity of the promontory.
1453. Have you at all passed round the west coast? Yes, to Swan River.
1454. In turning the great continent to the westward, are there any considerable points of land which deserve to be noticed, presuming that you were going to Adelaide or Swan River? In coming from Adelaide down to Portland Bay, I would have given anything for a light on Cape Northumberland or some of those places.
1455. Would not Cape Northumberland be the most important point to be lighted, being as much a turning point to the west as Cape Howe is to the east? Yes.
1456. Have you ever seen Cape Northumberland? Yes, often.
1457. It is a low sandy shore there, is it not? Yes.
1458. Have you found the need of a light there at any time? Yes; I was once trading for a twelvemonth between Launceston and Adelaide.
1459. Is any other light necessary in that neighbourhood? Yes, at Cape Nelson.
1460. But that more with a view of running to Portland Bay than as a great highway light? Yes; Portland Bay is a capital place of shelter for any vessels coming from the west, and unless they have some light to be able to go in there at night they would get blown past the place, and then they would have no alternative but to run down to King's Island or to Port Phillip. I have been at anchor for shelter under Point Bunbury and Cape Patton.
1461. Do you think that if the lights you have recommended were undertaken—those at Point Perpendicular, Wilson's Promontory, Cape Schanck, and Cape Northumberland—the coast of Australia would be sufficiently lighted for some years to come? I consider so. I think a lighthouse is required at Seal Rock Point more than at any other place.
1462. As you have of course had opportunities of conversing with owners of vessels as to the impost of a small due upon vessels to meet the expense of lights, can you say whether you think that would be popular or unpopular? Every expense a vessel goes into is of course out of the owner's pocket; but I should say, that as far as we are concerned in the colonies, we can always make the public pay for it—that is, by adding so much more for freight and passage money; but I do not think any owner will be against contributing towards a lighthouse for the safety of his vessels.
1463. Do you not think they would often save in the matter of insurance if the coast were properly lighted, so as to ensure absolute security for anything like ordinarily competent persons? Yes, they would save in that.
1464. In trading between Launceston and Portland Bay—which trade you said you have been employed in—have you ever come near the north end of King's Island? Very often.
1465. Have you had opportunities of seeing that island? Often.
1466. Can you say whether it is liable to be clouded by fogs, or whether it is sufficiently clear



- clear in ordinary weather to ensure a light being seen? It is quite clear in ordinary weather. Capt. W. Bell.  
I seldom or never have seen it clouded.
1467. It is not more likely to be clouded than other headlands in thick weather? No. 8 Aug., 1856.
1468. Have you occasionally taken shelter under that island in gales of wind? Yes.
1469. Have you been by Sea Elephant Bay? Yes.
1470. Have you at all considered the question of the propriety of placing a light on King's Island? I think a light ought to be placed on the south point of the island, because in the north point of the island you come almost within range of Cape Otway lighthouse; but for vessels bound to Sydney, Port Phillip, or any of those places, I think the most important point would be the north end. I am speaking more as to the trade between Launceston and Portland and Adelaide, which I have been engaged in.
1471. Do you think the placing a lighthouse on the north end of the island would be likely to warn a vessel, or would bring her into danger? It would be likely to warn her.
1472. You would advise the erection of a lighthouse there? Yes; on the north end of the island.
1473. The channel to the southward is not very generally used, is it? Not unless you are bound to Launceston. No vessel would ever go past the south part of the island if bound to Sydney.
1474. Would not a vessel bound to Launceston, knowing that there was a light on the north end of King's Island, much sooner take that passage if it was lighted, than the southern passage if it was not lighted? Yes, it would induce them to go to the north. No man would take the southern passage unless he was really obliged to do so. A man being able to bring a light on King's Island to bear to the westward of south would feel that he was clear of the Harbingers, and he would be able to run through the straits with confidence. The Harbingers appear to be a great deal farther off than they are laid down on the chart.
1475. Have you ever considered the position of the New Year Islands—whether they would be preferable to the north end of King's Island as a site for a lighthouse; some masters of vessels have given it as their opinion that the New Year Islands would be a preferable site? I never was in that vicinity, but I should say not.
1476. Are you aware that the majority of the wrecks that have occurred have been to the southward of the New Year Islands? Yes.
1477. Would not a light on the New Year Islands have been of great service to the vessels that were lost there? It might have been; I know most of the wrecks have been to the southward of those islands, and at the time the "Catariqui" was wrecked they had no observation for four days before she was wrecked. The chief officer told me that it was his watch when they filled upon her at four o'clock in the morning, and the vessel being under close-reefed topsails, the question was whether, if they kept her lying to all night, they would have had sufficient room to clear the rocks in the morning.
1478. Then she must have been lost under any circumstances? That was his opinion.
1479. Do you think it would be a great boon to navigators to have a light upon the north end of King's Island? I think so.
1480. And you never have seen the land there more clouded than land usually is in thick weather? No; I have been there many times and never saw it clouded at all.
1481. Have you ever seen the Ten-foot Rock? Yes; I have been between that and the Rodondo several times.
1482. Do you think it would be practicable to erect a lighthouse on that rock? No; I think not.
1483. Does the sea go over it? Clean over it.
1484. Would it be practicable to put a lighthouse on the Rodondo? No; it would be inaccessible.
1485. Is it not too high for a light? No; but I should say in the months of December, January, and February, two-thirds of the Rodondo at the top is covered.
1486. Do you think it would be possible to put a light on the promontory itself so as to make it available for navigation both ways? I am afraid the Glennies would be too high for a light on the promontory to be seen, and if you went further in shore it would be too high for the fogs.
1487. Are the Glennies high? Cleft Rock is one of the Glennies.
1481. If it was possible to put a light on Cleft Rock, would that be the most eligible spot in your opinion? I should think so.
1489. Would it not be shut to vessels coming from the eastward? Yes.
1490. Have you found the currents to be very strong in the straits? There is a current about King's Island and about Kent's Group. There is no current in the open straits.
1491. Will not steam vessels always cut off corners when they can? Always.
1492. Then a light on Hogan's Island would not be so useful to steam vessels which shave round Wilson's Promontory as having two lights off the promontory? No; steam vessels when it is blowing hard to the westward usually keep along the Ninety-mile Beach, as close in as possible, and therefore the Seal Island light under those circumstances would be very useful.
1493. Did you ever land on Wilson's Promontory? No, I landed just inside of it. It is not generally known that on the east side of Cape Liptrap there is a much deeper indentation than is shown on the chart, and the anchorage in heavy westerly gales is very good, and the holding ground is good, and the depth of water is good.
1494. Are you satisfied with the lights on Shortland's Bluff now? Nothing could be better; they are excellent for the purpose.
1495. You do not consider there is any necessity for another lighthouse being erected on Point Lonsdale? None, whatever; I should consider it a useless expenditure of money; but a light on the Schanck I should think very necessary for all vessels coming from the eastward; and for vessels coming from Launceston a light upon the Schanck would be most important.

- Capt. W. Bell. 1496. Of all the lights you have pointed out as being advisable to be erected, which do you think are the first that ought to be taken in hand? I think the light in the vicinity of the promontory.
- 8 Aug., 1856. 1497. And you think that would be more important than the King's Island or the Schanck light? Yes, and the light upon Cape George or Cape Perpendicular should be also taken in hand as well; but, certainly, the most important light would be the one on the promontory. [The Witness with-res.]
- Adjourned to to-morrow, at Ten o'clock.

SATURDAY, 9 AUGUST, 1856.

Present:—

CAPTAIN KAY, R.N., | MR. BROWNE,  
MR. DOUGLAS.

Captain Thomas Wing examined:—

- Captain T. Wing. 1498. What vessel do you command? The "Pioneer."
1499. Is she a steamer? No, a sailing vessel; a clipper fore-and-after.
- 9 Aug., 1856. 1500. Where has she been trading to? To Van Diemen's Land, lately.
1501. Have you for the last ten or twelve years been in command of different vessels trading to most of the Australian ports? For the last twenty-six years.
1502. What ports in the Australian Colonies have you traded to and from in those twenty-six years? I have been several voyages to Sydney, and from Sydney to Melbourne, and from Sydney to Hobart Town and Launceston, and from Melbourne to Hobart Town, and Melbourne to Adelaide, and Sydney to Adelaide.
1503. Then you have a tolerably good knowledge of the nature of the dangers which you have to contend with in the navigation of this part of the world? Yes. When the Crocodile Rock in the straits was for a long time considered doubtful, it was in 1827, when I was coming out in the ship "Ferguson, we corrected the position; we lowered boats down and took the proper bearings of it; the position was marked "doubtful" at the time on the chart.
1504. Have you ever traded to the northward of Sydney at all? Merely in going through Torres Straits.
1505. Your principal voyages have been to the southward? Yes.
1506. In coming to the southward from Sydney to Cape Howe, or in going from Cape Howe back to Sydney, are there any points on the coast of New South Wales which, in your opinion, require to be lighted beyond those that are already lighted? There is one particular point, called Cape St. George, at which I think a light would be desirable.
1507. Have you found in proceeding to the northward that there is a considerable indraught setting in under that point? There is a very strong indraught; I have often noticed it in fact.
1508. Have you found that, in making what you might consider your proper course, from Montague Island to Cape Howe, your vessel has been thrown into the land, and you made Cape George upon your weather bow? I have noticed it so often that the latter part of my voyages here I used to make a regular allowance to avoid it, by steering a point more to the eastward. I have many times been drawn in there by the indraught.
1509. And you think it would be desirable to put a light there? Yes; I think so, very much so indeed.
1510. And it would be a great boon to mariners standing to the northward? Yes.
1511. Where would you propose that the light should be placed—on Cape George or on Point Perpendicular? From what I recollect of it, I think somewhere about the head of Cape St. George would be the best place.
1512. Do you think then that it is more important in going from the southward than it would be in coming from the northward? Yes, decidedly; it is in going from the southward that you fetch it up so.
1513. Then you would not care about the light at Cape St. George being seen over Point Perpendicular in coming from the northward? If that point could be gained, I think it would be very desirable.
1514. In coming from the northward, if the light were on Cape George until you opened Cape Perpendicular, you could not open the light? I am not prepared to speak as to the height of the land, but if the light could be placed so as to be seen from the north as well as from the south I think it would be the best.
1515. Then you think, if the ground be not too high, Point Perpendicular would be the best point? Yes; I think a light in that locality would be very useful, and would prevent many accidents. I have known very many vessels get into that bight, particularly in easterly weather, when it was thick.
1516. That is into Wreck Bay? Yes.
1517. Have you navigated the straits since the erection of the Gabo Island lighthouse? I have.
1518. Do you think that lighthouse is in its proper position? I think it is very good in position, but the light is very dull sometimes.
1519. Do you attribute that to the atmosphere? No, I think it is from defective management; I have noticed it several times very dull indeed.
1520. Do you think the light is high enough to be seen at a sufficient distance? Yes; there are many times when the weather is hazy that you can see a low light when you could

not

not see a high one; there is the light on Kent's Group for instance, I have been within a mile of the island and could not see it.

1521. That light in clear weather can be seen an enormous distance? Yes.

1522. After passing Gabo Island, coming to the westward, either bound to Melbourne or Adelaide, are there any points in the straits which strike you as being of sufficient danger to require lights to be erected? About Wilson's Promontory I think there ought to be a light.

1523. That will always be the turning point for the trade? Yes; the last time that I gave my evidence upon this subject I was very much inclined to think that Cleft Island would be the best position, because you could always sail direct for it, and go within a few fathoms of it and be in perfect safety; there are no dangers round about it.

1524. Are you not of that opinion now? I am still of that opinion, because vessels can steer direct; and if the weather is a little thick there is no danger in the way, and you can steer direct for the light from Port Phillip Heads.

1525. But a light on Cleft Island would not be visible in coming from the eastward until you opened the promontory? Certainly, if a vessel was well in shore she would not get sight of it. I was certainly wavering a little in my opinion on that subject, on account of the difficulty of having the light placed so high. I thought there might be the same fault as at Kent's Group.

1526. Do you think if the light could be placed on some island or rock, or in some position where it could be seen both from the eastward and from the westward, that would be the best position? Decidedly.

1527. But if the engineering difficulties are so great and the promontory so high, that you could not erect a lighthouse on the south of the promontory, you would recommend Cleft Island? Yes, Rodondo is too high. You could certainly get a light low enough on one side, but it would be obscured from the other side.

1528. Do coasting vessels coming from the eastward and westward generally use the passage between Wilson's Promontory and the Rodondo? Yes, steamers particularly.

1529. Do you think the great ocean line of steamers, when established here, would be sure to use that route? I think so. It is a nice clear channel, and every rock about it is very bold.

1530. Do you know the Ten-foot Rock? Yes.

1531. Is that ever clouded? I have never seen it clouded, and I have been very close to it.

1532. Do you think it would be possible to put a lighthouse there? I think it would, but I fancy it would be shut in very much. I think the erection of a lighthouse there could be accomplished easily, particularly one of the iron lighthouses.

1533. You think the sea in a westerly gale would not be so destructive as to prevent its erection and maintenance? No. There are three rocks—it is not one solitary rock. I think it is sufficiently above water to break any heavy sea, such a sea as would do a lighthouse any injury.

1534. You think that if the engineering difficulties are not insurmountable the Ten-foot Rock would be the best position for a lighthouse? I think so.

1535. That would command an excellent view in both directions? It would indeed; it appears very close to the Rodondo when you are near it.

1536. But even supposing it was rather close to the Rodondo, the Rodondo would only shut it out from the southward, and that only for a very short time? Yes; from what I have seen of the rock I think it would be quite possible to put a lighthouse on it.

1537. At all events you conceive that it is urgently required that there should be a lighthouse in the neighbourhood of the promontory on whatever might be found to be the most eligible spot? Yes. I have been very much taken by the appearance of Cleft Island, there being a large cave on it; that cave is all overgrown with grass, and the sea never seems to fetch up into it, and it struck me that there might be as it were a pair of davits or sheers rigged to hook a boat up, and that a winding staircase might be made right through the solid rock, and a lighthouse be placed on the top of the rock, and the stores might be kept in the cave.

1538. Could you see the light on both sides from Cleft Island? You could see it a long way out—it is only when you are embayed that you would not see it. A vessel steering down in her proper course would be sure to open the Cleft out.

1539. What is the bearing of the promontory when you open the Cleft out? West-south-west; steering a course from the cape to the promontory you would open the Cleft Island with the promontory bearing about west-south-west. Supposing a light was on Cleft Island a ship would see it when she was fifteen miles to the eastward of the promontory, when steering a direct course from Cape Howe, and she would not shut the Cleft Island light in unless she got right in amongst the islands.

1540. Is the Cleft Island high? It is a fine bold rock; I should think about 150 feet high.

1541. In passing round the coast to the westward is there any other point upon the coast which requires any additional lighting? I should think a light at Cape Schanck would be very desirable.

1542. Do you think a light there would be equally serviceable to vessels coming from the westward and vessels coming from the eastward? I do.

1543. And would not it be particularly useful to vessels coming from Launceston and Hobart Town? From all quarters of Van Diemen's Land.

1544. If a light were erected there, would not a man run with great safety, so that he might pick up the cross bearing of the Schanck light, and run with confidence for the entrance to the heads? Yes. With reference to the Shortland's Bluff light, I wish to point out that there is a gap in Point Nepean where we get a glimpse of the light for a second or two, and then it is shut in; and I have often thought that if the light was raised a little higher, or if the trees that are there could be moved, we should get a sight of the light much sooner and much longer.

- Capt. T. Wing  
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1545. Would the removal of the trees on Point Nepean effect that object? I think it would be better that the light should be raised, because at present when the light does open out you are close down upon the beach. I think it would be a very great improvement to raise the high light at Shortland's Bluff so as that it could be seen over the low land.
1546. Do you think a light at Cape Schanck is an important light to be erected? Yes.
1547. With a light at Cleft Island and another at the Schanck would the lighting of the straits be then almost perfect? I think so. I am not exactly prepared to say how far the raising of the light could be carried out, but I think it would be a very great improvement if it could be raised so as to be seen over the low land, and that, I think, would do away with the necessity of putting a light any where about Flinders' Point.
1548. Did you ever give your attention at all to the necessity for any light after passing Cape Otway when bound to South Australia; is there any point on that coast which requires a light? I think a light is very much wanted about Cape Bridgewater. I am not exactly prepared to say which of the two capes, Cape Bridgewater or Cape Northumberland, would be the best, but to the best of my recollection I think it would be better at Cape Bridgewater.
1549. Would not Cape Northumberland be the point at which a vessel bound to Adelaide would alter her course? It would.
1550. Would not it be the turning point? It is a turning point.
1551. Would it not, therefore, be of great importance that that point should be lighted? I do not know any part of the coast where a light would be of more service than it would there.
1552. Are you aware that a very considerable number of vessels have been wrecked there of late years? Yes; there are some very nasty patches of foul land along the coast there in the neighbourhood of Cape Northumberland, with not more than from five to seven fathoms of water upon them.
1553. With a light upon Cape Northumberland, Cape Schanck and the promontory, do you think that the south coast of Australia would be sufficiently lighted for many years to come? Yes; but I should like attention to be drawn to the Shortland's Bluff lights, and the desirability of the higher light there being raised still higher, so that it might not be eclipsed as it at present is after showing through the gap at Point Nepean.
1554. How much do you think it would require raising? That must be a matter of observation.
1555. Do you think the two lights at Shortland's Bluff are sufficiently wide apart for leading lights? Yes.
1556. Would it be sufficient to raise one light? Only one light; the red light is merely a leading light, the other would be a guide at sea.
1557. Which is the light you would recommend to be raised? The upper light.
1558. Have you ever given your consideration at all to the advantages or disadvantages which would accrue to the navigation of the straits by the erection of a light on King's Island? I think a light would be very useful there.
1559. You have in your voyages sighted the island frequently, have you not? I have been on it. I have many times anchored round about King's Island, and the anchorage there is very good.
1560. On the east side of it? Yes. In westerly gales a person might, if he could see a light there, bear up and run right round to leeward of the island with perfect safety.
1561. Having given such a decided opinion that a light is desirable there, on which part of the island would you recommend its being placed? On the north point, near Cape Wickham; there is a sort of hill there where it could be very well placed.
1562. Have you ever considered the question of putting a light on the New Year Islands? Yes, but I do not think it would answer at all.
1563. Do you not fancy that the erection of a light upon King's Island would tend to bring vessels into danger instead of taking them out of danger, in consequence of the immediate vicinity of the Harbinger Reefs? The Harbingers lie but a short distance from the land there, and in almost any weather you would be able to see the light before you got near the Harbingers.
1564. Have you had an opportunity of judging of the state of the atmosphere which surrounds King's Island? Yes.
1565. Is it sufficiently clear for the purposes of a lighthouse, or is it generally clouded and capped? Generally pretty clear.
1566. Not more clouded than other high lands generally are? No, not at all. In heavy westerly gales, if there was a light there, a vessel could run without danger and come right round under the lee of the island, and a man might strike his sails, let go his anchor, and come to at once.
1567. And ride there in perfectly safety? Yes.
1568. Now you have no shelter there, nor can you take advantage of the anchorage unless in the daytime? No. Everybody is so much alarmed about getting near the Navarino and Harbinger Rocks that they keep out in open sea, and of course get blown so far to leeward that they cannot pick themselves up again.
1569. The majority of wrecks on King's Island have taken place to the south of the New Year Islands? Yes.
1570. Would a light on Point Wickham be available for vessels in such a case as that? Yes; they could see that light as clearly as possible, because the land is sloping down to the water on both sides.
1571. Are you sure that the light on Mount Wickham could be seen over the New Year Islands? Yes.
1572. And well to the southward, to warn them of their danger? Yes, the bearing of that light would show them where they were.
1573. Do you consider it imperatively necessary that there should be a light erected there for the safe navigation of the straits? I do.
- 1574.

1574. Do you look upon that as being as important a light as any of the others you have been recommending? No, I consider the Schanck light more important than one on King's Island, since we have got one on Cape Otway, because if they would only keep the north shore aboard, they could sight the Otway light with perfect safety.

Captain G.  
Wing.

9 Aug., 1856.

1575. Then, although an important light for assisting vessels which wished to run under the lee of the island, you think other lights, such as the Schanck and the promontory, would be more important? I do, but I think a light on King's Island would be a very great service, and be of advantage to the safety of the navigation of vessels coming from Adelaide to Hobart Town; the first thing they would look to make after losing the Otway light, would be to pick up the King's Island light.

1576. Would it be more important to vessels bound from Adelaide to Launceston and Hobart Town than to others? No, I think it would be equally important to ships coming from England right through the straits.

1577. Then you think it is of equal importance to all vessels entering or going out of the west end of Bass' Straits? Yes.

1578. Whatever trade they may be in? Yes. I have been very much perplexed myself coming into the straits when I have got into a great deal of sea in rough weather, whereas if I had had a light there I might have got into smooth water.

1579. Are there any other suggestions with regard to the navigation of the straits on which the Board have not examined you, on which you would favour the Commission with your opinion? No; I think you have touched upon the principal points that I am aware of; I do not know any other places that require lights which remain unlighted.

1580. You think with the enormous trade now passing backwards and forwards through these straits, those lights which you have suggested ought to be carried out at once? I do. I think it would be a great benefit to the trade.

1581. Would not the effect of the erection of the additional lighthouses be, that it would have a tendency to reduce the rates of insurance as giving greater facilities to the navigation? I think it ought to do so, but the underwriters do not do it.

1582. Are you familiar with the set of the current in the neighbourhood of Cape Otway and King's Island? Yes.

1583. Does it take any distinctive feature at all that you could point out? No more than I think there is a general set to the eastward, more particularly in the winter season when the south-west winds prevail.

1584. Then the currents are very much governed by the direction of the winds? Yes.

1585. Have you ever noticed a strong southerly set on King's Island setting down on it from Cape Otway? Yes, the current does set along in that direction.

1586. It does set to the south? Yes.

1587. That would account to some extent for the number of ships that have been caught on the west side of King's Island in heavy weather? Yes, the tide through the straits between King's Island and the Hunter's Island is very strong at times. I should think the tide goes at least five knots.

1588. A regular ebb and flow? Yes; I have been for hours there, and could not get ahead with the tide going five knots.

1589. You are of opinion that a light placed in an elevated position near Cape Wickham could be seen over the point of King's Island which lies just south of the New Year Islands? Yes; Cape Wickham is the highest land on the whole of King's Island.

1590. Can you give the Commission any information as to whether water can be obtained on Cleft Island? There is no water there, but you could have a cistern there that in the winter season would supply them with water. A cistern could be excavated in the rock, which would give them ample water. The sea is so very bold on King's Island, that even in rough weather there would be no difficulty in landing.

1591. Is the cave at Cleft Island protected from the westerly gales, or on which side of the island is it? I think it is on the southern side of it.

1592. Then it would be open to the south-west gales? Yes; but I think it would be found also that there would be very good shelter on the lee side of the island.

1593. Sufficient to land the stores? Yes, or to land with boats. If it were closely inspected I think many advantages which I am not aware of would be found as to landing on the lee side of the island, because it is completely sheltered by rocks attached to the base of the island, and places might be found which I am not aware of. Another advantage of a light being placed on Cape Schanck would be, that in heavy south-west gales a vessel would run down towards the light, and in case of an accident she could bear up and run into Western Port. The land is pretty bold there, so that they could feel their way in very well with a lead. The light on Shortland's Bluff, I think, would be very much improved by being raised, if it could be raised sufficiently to be seen over the low land, or if not, I think if the top of the low land, the brush or scrub, could be cut away on Point Nepean, you would get a greater angle, and you would have pretty well ten or twelve miles in which you could see the light. If you could gain that object, it would do away with the necessity of having another light anywhere else about there on Sandy Point or Flinders' Point. This very last trip of mine I made the land well up towards White Point. I ran along, steering a course as I thought for the gap, and I could not see the light until I opened the gap. If the light had been higher I could have seen it over Point Lonsdale, because it is all low land there.

1594. But supposing you had known there was a light on the Schanck, would you not have made that light? No; because there being a westerly wind I was hugging the westerly shore. I think if the light was raised it would be seen over the low land. It is a nasty low dangerous shore, and on a dark night you are right upon it before you know where you are, whereas, if you could see that light it would give you a distance of fifteen miles off, that is, if the light was raised to the proper height. What that height might be could only be ascertained by observation. [*The Witness withdrew.*]

Barnard Robert Mathews, Esq., examined :—

- B. R. Mathews Esq.**  
9 Aug., 1856.
1595. You are now Lloyd's Agent in Melbourne? Yes; I originally commanded the "Great Britain" steamship to these Colonies.
1596. Had you made any voyages to these Colonies previously to that? No; my first voyage was in the "Great Britain" in 1852; there was no light then on Cape Howe.
1597. You came from Liverpool to Melbourne and from Melbourne to Sydney, then from Sydney back again to Melbourne, and then home, did you not? Yes.
1598. Did you go home round to the eastward? No; the first voyage I took the north west route, round the Cape of Good Hope, and the next time I went through Banks's Straits; there is a very good light there.
1599. In entering Bass's Straits from the westward have you ever considered the question of the necessity of a light on King's Island? I did on my voyage coming out in the "White Star," also on my last voyage with the "Great Britain"; the wind was very scant, and I was afraid I should have to shave King's Island very close. I was timid when near the west end of it, in consequence of the rocks which are there. I was getting short of coals. If there had been a light there I should have made the island and saved a little time, but fortunately as I was approaching the land the wind came up and I fetched the Otway.
1600. Seeing that there are dangers existing to the northward of King's Island, do you think that a light there would at all induce a master of a ship to borrow upon that island and so lead him into danger, or do you think a light would be an advantage to keep him out of danger? It would be a warning to keep him out of danger and also give him confidence when there has a scant wind, whereas if he knew there was no light there he would be more cautious, knowing that he was near the island; the currents thereabouts vary very much. Sometimes indeed there is no current, and there is no dependence on the current, and I do think if a light were there a man might keep on his course and make his port instead of standing out and losing the night.
1601. Then you have no hesitation in recommending the erection of a light on that island? Not the least.
1602. On what part of the island would you recommend its being placed? I have had a great deal of conversation on the subject with Captain Ross, and the part he has pointed out I quite agree with him in thinking would be about the best spot for a light to be placed.
1603. On the north point? On the north point, decidedly. I think it would be visible there earlier than at any other part, and would be more serviceable to vessels coming either way.
1604. Have you considered the question of putting a light on the New Year Islands? I have; and although I differ from other parties who have expressed an opinion on the question, still it is a matter of opinion, and mine is that the north cape of King's Island would be the best position.
1605. Are there any sailing instructions for the use of mariners that you are aware of warning them not to borrow on King's Island? I do not remember; I have always been cautious of King's Island.
1606. Would you think it a desirable instruction to be given if a light were placed there that ships should be taught not to make use of it too freely? I think it would be advisable.
1607. And that the light should be merely used as a beacon to warn them from danger? Yes; in case they were driven in, in bad weather, and warning them not to approach the island unless driven there unavoidably by currents or winds, and then if they knew there was a light on King's Island it would guide them free of danger. In coming out in the "White Star" we made the island, and stood to the westward.
1608. At what portion of the island? About the centre; from the quarter-deck I saw it clearly; we were about thirty-four miles to the southward and westward of it.
1609. Had your vessel been set down by any particular current? Yes; we had had strong winds to the northward, and then it fell calm all of a sudden. My reason for recommending a light to be placed on the north end of King's Island is, to steer clear of the dangers which exist there.
1610. Are you aware that the great majority of the wrecks that have taken place on King's Island have taken place to the southward of the New Year Islands; how do you account for that? I expect they have been farther to the eastward than they expected to be, and have got close to the island before they have about.
1611. Do you think a light on the northern end of the island would be advantageous for vessels making the middle of the island, where most of the vessels have been lost which have been wrecked there? Vessels coming in would see this light in time to warn them of danger, if sufficiently elevated.
1612. Would they see it over the New Year Islands? They would.
1613. And over the cape that juts out just south of the New Year Islands? I think, if high enough, it would be seen over all. If you have a lighthouse there it should be visible from all those points seaward.
1614. You think it would be advisable to have a light upon King's Island? I strongly recommend it.
1615. Do you think it actually necessary to have a light there? I do consider it absolutely necessary.
1616. But you do not consider if a light were placed there it would lead a ship into danger? Not at all.
1617. It would act as a beacon to her? It would facilitate trade. My object for recommending a light there is, that a man coming in at night time if he should happen to be near the spot, instead of heaving to all night, not exactly knowing where he was, by making this light he would have confidence and make his passage by a reasonable time in the morning.
1618. In proceeding into Melbourne from Cape Otway, are there any points there that you think

think require to be lighted more than they are now? It is a blind port until you get very close to it, and I have frequently heard strangers make use of the same remark, that they have taken Western Port for the entrance into Port Phillip; and until you get well up towards the entrance you cannot see which is the entrance to the harbour, until you make the lighthouses in the daytime. At night whether you can see the lights at the entrance coming in from the Otway or not I cannot say, but I should imagine it would be very much easier to approach the harbour at night than in the day. I have never approached the harbour at night time, and therefore I can hardly state whether the lights are sufficient or not, but I should imagine that if the lights are good at the entrance they would be quite sufficient for a man to run in a certain distance and heave to for a pilot; I would not approach too near the mouth of the harbour before I heave to, and the harbour lights would be sufficient I think. I have heard a light at Cape Schanck advocated as being useful for the coasting trade; I am also of the same opinion, and more especially for large ships working up from Cape Otway.

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1619. Would not a light at the Schanck be of importance to a stranger approaching the port? I think it would be very valuable as giving a cross bearing.

1620. You think it would be useful principally for the coasting trade? Yes.

1621. What would be the effect of a Cape Schanck light as a great highway light for vessels proceeding through the straits to the eastward either to New Zealand or Sydney, do you think it would be of any use to them? Coming to Melbourne it would be valuable, it would be the leading mark for the entrance; by the time you got well abreast of that light you would pick up the harbour lights.

1622. For a great highway light would it be valuable? I have no doubt that for a great highway light it would be equally valuable.

1623. You have stated already that you have not made use of the Shortland's Bluff lights at all at night? No, not in command of a ship; I think a light at Cape Schanck would tend to give confidence to all mariners, speaking from my own observation and from the observation of others.

1624. Have you ever considered the question of a light on Point Lonsdale, considering that there are already two leading lights on Shortland's Bluff? I do not think it necessary.

1625. Have you heard any complaints from masters of vessels that the upper light at Shortland's Bluff is not high enough, and does not command a sufficient radius of vision? No.

1626. In proceeding to the eastward of the passing the entrance of Port Phillip, what is the next point that you think should command the attention of the Colonial Governments with regard to lighting? Cape Schanck.

1627. In proceeding from Melbourne after passing the Schanck, you think the promontory would be the next place at which a light ought to be erected? I think it very important that there should be a light there.

1628. You have commanded a large steamer and taken her through Bass's Straits? Yes.

1629. Would a light upon Wilson's Promontory have given you much greater confidence in doing that? I should have found it valuable.

1630. Therefore it would be very valuable for the ocean line of steamers when they are established in running from Sydney to Melbourne? Yes.

1631. Are you familiar with the peculiarities of Wilson's Promontory? No.

1632. Do you know the Ten-foot Rock? Yes.

1633. Have you ever landed on it? No.

1634. Would that be a good position for a lighthouse if it were possible to erect one there? I imagine the Ten-foot Rock would be a very good position; I think it would be seen going from the westward, also coming from the eastward.

1635. Supposing it should not be practicable to put a light upon the Ten-foot Rock what do you think would be the next best point? The promontory.

1636. Do you not think the Rodondo would be likely to interfere with the light upon the Ten-foot Rock? The Rodondo would shut it in for a short time, but you would very soon have it open again; the Rodondo is a very small island, and when you shut it in it would only be shut in from the south, it would not shut it in for vessels passing from the straits east or west.

1637. Have you ever considered the position of Cleft Island, which is situated to the south-west of the promontory? Yes, that would be more out of the way than the promontory; it would be very little use in going from Melbourne, when you can see the Cleft Rock you can see the promontory, if you keep a good offing.

1638. Then you think either the Ten-foot Rock or the promontory itself would be the better position? Yes.

1639. Have you ever seen the Cleft Rock? Yes.

1640. What height should you think it is? About 100 feet. I have gone close to it.

1641. Then if it is only 100 feet high, and it is possible to see it to the eastward of the promontory, of course it would be available for vessels coming from the westward? Yes.

1642. With regard to all steam communication between these various colonies, then you are of opinion that a light on Wilson's Promontory or near it is most indispensable? Yes.

1643. If you commanded a large ship under sail would you hug the promontory. I would.

1644. When there is a light at Kent's Group and no light on the promontory? You must have clear weather to see the light on Kent's Group as you are entering the straits from the westward.

1645. In coming from the westward what passage would you take in a large ship? I should shave the promontory with a leading wind.

1646. With a ship under sail? Yes, if I had anything of a leading wind; beating through I should certainly not; but with a leading wind, if I could go round comfortably full sail, I think I should borrow close round the promontory.

1647. A steam ship would do so under all circumstances? Yes.

- B.R. Mathews Esq.** 1648. After passing Cape Howe, when bound to Sydney, does it appear to you that there are any points on that coast which deserve consideration and upon which it would be advantageous to have lights besides Cape Howe and Sydney Heads? I do not know how you are situated for a light at Twofold Bay. That bay is used as a harbour of refuge, and should be lighted; a light there would also answer for a highway light.
1649. This Commission is not instructed to deal with anything but highway lights. Have you ever found any difficulty in approaching Sydney from the southward for the want of any lights upon any points of the coast? None. I have always shaped a straight course in steamers, I have never been beating up or in shore.
1650. You do not know how the want of a light might apply to coasting vessels? No, I cannot give an opinion upon that subject.
1651. Have you seen the light on Cape Howe? Not on Cape Howe. It is on Gabo Island. I saw that when it was erecting and since its completion.
1652. Do you think that is sufficient as a turning light? Yes.
1653. Is it sufficiently powerful? As far as I can judge, it is.
1654. What is the greatest distance at which you have seen it? I have seen it some seven or eight miles I think.
1655. Have you ever been to Adelaide from Melbourne? Never. I have been up the coast going to the westward round Cape Leeuwin, *en route* to the Cape of Good Hope.
1656. In going up from the Leeuwin, what additional lights would be necessary? In my opinion a light at Cape Bridgewater or Cape Northumberland would be desirable. I should imagine Cape Bridgewater is the most projecting point. I think it very desirable that a light should be placed on one of those points, but I am not prepared to say which.
1657. Looking at the trend of the land which should you imagine to be best? I should think Cape Bridgewater would be the best place.
1658. Have you ever seen either of those capes? Yes, I saw them on the first voyage of the "Great Britain," I made the land about that part; it was in a very thick fog, and directly I made the land I shaped a course for Cape Otway.
1659. Would a light on either of those capes be of any service to over-sea ships approaching Bass's Straits from the westward? I think it would be very advantageous to vessels coming along the coast. If they made the land preparatory to making Cape Otway, I think it would be valuable.
1660. If there were a light on Cape Bridgewater or Cape Northumberland, would you prefer to make that light before making the Otway light? No, I should not prefer it.
1661. Supposing you had northerly winds, and you were in command of a sailing vessel, would it not be advisable to make Cape Northumberland? Yes, if the light was placed there.
1662. As a general rule you think a mariner would always make for Cape Otway in entering the straits? Yes; a light at Cape Northumberland would be more serviceable for the coasting trade than for anything else.
1663. Would not a light on Cape Northumberland be advantageous in the summer time to vessels meeting a south-easterly wind and being thrown in upon the land? Yes, it would be valuable in that case.
1664. Have you any further suggestion to offer to the Commission? None whatever; I think everything I intended to suggest has been anticipated by the questions that have been put to me. [*The Witness withdrew.*]

Adjourned to Monday next, at ten o'clock.

MONDAY, 11 AUGUST, 1856.

Present:—

CAPTAIN KAY, R.N., | Mr. BROWNE,  
Mr. DOUGLAS.

Mr. George Doran examined:—

- Mr. G. Doran.** 1665. You formerly commanded the "Queen" steamer? Yes; for the last eighteen months.
1666. In what trade has she been running? From here to Warrnambool, Port Fairy and Portland Bay.
1667. Have you ever been in command of any other vessels trading to any other ports of the Australian Colonies? Yes; I had the command of a barque called the "Margaret," trading between this and Adelaide, and a brig called the "Louisa."
1668. In the same trade? Yes.
1669. During the time you have been occupied in that trade have you had ample opportunities of judging of the positions of the different points on the coast that are lighted, and those that are not lighted? I have.
1670. In coming from Adelaide to Melbourne, in a sailing vessel, are there any points of the coast that strike you as requiring to be lighted? I should think if it is intended to light the coast generally, a light on Cape Northumberland, and a light on Cape Bridgewater also would be desirable.
1671. But if the coast were only to be lighted with a view of ensuring a sufficiently safe navigation you would recommend a light on Cape Northumberland? If there was only one light I should say Cape Bridgewater would be the best site for it.
1672. Would you say that with reference to the voyage from Adelaide, or more with reference to making the voyage to Portland? It would apply to vessels coming from the westward



westward generally, inasmuch as they would run into their latitude, and allowing themselves a few miles of an offing if they missed seeing Cape Northumberland they would be sure to make Cape Bridgewater. Mr. G. Doran.

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1673. Do you think a light on Cape Bridgewater would be equally useful for vessels from the westward? I should think so. Coming round from Adelaide they would have to clear themselves of Cape Jaffa, and the master of a sailing vessel giving that a good berth would throw himself more to the southward.

1674. Do you not consider Cape Northumberland the first turning point from Adelaide? Yes.

1675. Is it not the principle generally adopted to have the lights at the turning points? Yes. For vessels from Adelaide perhaps Cape Northumberland would be the most favourable position; but for vessels from the westward generally, large vessels bound to Melbourne, Sydney, or Van Diemen's Land would, I should think, prefer Cape Bridgewater, and I should think that would be a good leading mark for Portland.

1676. Would it be at all advisable for vessels coming from the westward, bound to Melbourne or Sydney, to make the land so far westward as either Cape Northumberland or Cape Bridgewater? I do not think it is universally adopted by masters of vessels to make the land so far to the westward; they generally make the land somewhere about the Otway in preference.

1677. The prevalent westerly gales generally tend to the southward after blowing from the westward, do they not? Yes, invariably.

1678. Then if a vessel were making Cape Bridgewater, and the wind southered on her, she would be likely to be thrown upon a lee shore? She would have Portland to make for, but otherwise if she got into the bight she would be in an awkward position.

1679. Then would it not be advisable to light only Cape Northumberland so as not to induce her to go into the bight at all? For a particular purpose, taking Adelaide merely into consideration and the number of vessels making the land down about there, perhaps it would be as well; but I am taking into consideration also that it would be a famous leading mark for Portland, being a safe harbour, in south-west gales particularly.

1680. Then you would advise that there should be two lights—one on Cape Northumberland, and one on Cape Bridgewater—as a leading mark for Portland? Yes.

1681. Supposing there is a light on Cape Northumberland, and as there is one on Cape Otway, does any necessity exist for putting a light either on Cape Nelson or Cape Bridgewater, in your opinion? Cape Bridgewater is particularly remarkable going round to the westward from the east, that is with any vessels bound round the Leeuwin; I should think if it was intended to light the coast generally there ought to be a light on each headland.

1682. Would not a light on Cape Northumberland be useful to vessels from the westward in the summer season in the event of south-easterly gales? It would, and there is no hidden danger about Cape Bridgewater, whereas there is about Cape Northumberland—the reefs extend a good way out from Cape Northumberland.

1683. Have you ever been close in there? Yes, within four miles of the shore. I have seen all the vessels that are ashore there lying on the beach.

1684. Did you ever sound off that coast? No; I have seen the breakers a long way out, a couple or three miles at least.

1685. After rounding the Otway, bound to Port Phillip, does it appear to you that there is any light required in the neighbourhood of Port Phillip Heads? Not on the west side I should think, because you can go within half a mile of Cape Patton, and a man must be blind if he did not see it.

1686. On the east side do you think there are any points upon which a light would be advantageous? I cannot exactly say; I do not know so much of that coast.

1687. Would you advise that a light should be placed on Cape Schanck? Yes.

1688. Have you ever stood over to the east side of the bay in coming from Portland? When it is blowing strong from the north we have to reach over there sometimes.

1689. Would not a light on Cape Schanck be of considerable advantage to vessels bound to Melbourne if the wind hung to the eastward and they were obliged to keep a good offing from the western land, would they not have an advantage in picking up their position if there were a good light on that point? Unquestionably; but it would be necessary to have it well distinguished from the lights on Shortland's Bluff.

1690. That could easily be accomplished by making it a different class light, could it not? Yes.

1691. Are not the two lights on the Shortland's Bluff shut in by the neck of land at Point Nepean until you get into a particular position; is it not what is called a blind harbour? Yes, until you open Shortland's Bluff over the low points. The prevalence of northerly winds in winter renders a light on Cape Schanck desirable.

1692. In coming in from the westward, or in passing out to the eastward, have you had occasion to sight King's Island? I have, repeatedly.

1693. Have you ever considered the question whether any considerable advantage would be derived by shipping, in the way of preventing them from running upon the Harbinger Reefs, if a light were erected upon that island? I should think the best position on King's Island for a lighthouse would be at Cape Wickham.

1694. Do you consider that it would be a great advantage to the shipping that a light should be erected there? Most undoubtedly, especially for vessels from the westward and vessels beating out. The prevalent winds being from the south-west, vessels beating to the westward invariably sight King's Island.

1695. It has been given in evidence that the effect of a light upon Cape Wickham would be that it would be more likely to attract vessels into danger than to lead them from it, are you of that opinion? No; I am firmly of opinion that the last three principal wrecks on King's Island would have been avoided if a light had been there.

1696. You strongly recommend a light on King's Island? I do.

- Mr. G. Doran. 1697. Have you had any opportunity of judging whether the point on which it is proposed to place a lighthouse is frequently clouded and capped, or whether it is generally sufficiently clear for a light? I have never seen it capped.
1698. Have you seen it many times? I have, repeatedly.
1699. Do you think in heavy westerly gales that the effect of a light on that north point of the island would be to enable vessels to run into smooth water under the lee of it with facility? Unquestionably.
1700. You conceive that if a light had been erected there the vessels that were lost would have had opportunities of ascertaining their position before they got into the danger they did? No doubt of it. The three wrecks—the “Mapo,” the “Waterwitch,” and the “Whistler,” I think would have been avoided.
1701. Are you aware that the majority of the wrecks have been to the south of the New Year Islands? Yes.
1702. Do you conceive that a light on Cape Wickham would have given them notice of their danger? I think so. I have never sighted any other part of King’s Island than that in going to the westward.
1703. You are not aware whether a light on Point Wickham would be visible to a ship that happened to be on the west coast, south of the New Year Islands? It would be advantageous; it would show sufficiently far to clear the New Year Islands, I think.
1704. You do not know the character of the land there? No, I do not; I have not sighted the land so close to the westward as to judge of it.
1705. You think that, to vessels coming from the westward, it would be an advantageous position for a light, and would be likely to warn them from danger, and not lead them into it? I think so, unquestionably.
1706. You would not advise a vessel being bound from the westward to border upon that island unnecessarily, but that she should border upon the mainland? Yes.
1707. You look upon that light as more indicating a danger than a leading light? Unquestionably. Vessels bound from the westward could not be far wrong in their latitude; because, if they were a few miles out of their course for want of an observation, they would be sure to make either one light or the other.
1708. And you would advise the erection of a lighthouse there? Yes, on Cape Wickham I would.
1709. Have you considered the question carefully, where a light should be placed on King’s Island? I have for the last two years. I have thought it would be a great advantage to have a light on Cape Wickham.
1710. Have you heard it proposed to put a light on the New Year Islands? I have.
1711. But you still think Cape Wickham to be the most preferable position? Yes.
1712. Are you aware of any particular set of the current from Cape Otway toward King’s Island? A current runs through between the island and the main; the ebb and flow is east and west. It depends very much upon the weather.
1713. Is there frequently a set to the southward? Yes.
1714. Produced by northerly and north-westerly winds? Yes.
1715. Do you think a light on Cape Wickham would be very useful to vessels bound to the westward, in the event of meeting a strong westerly gale? I should think a light there would be of the greatest use.
1716. Your knowledge of the straits is confined principally to the navigation which you have now described to us? Yes. I have been once or twice at Sydney, but at pretty long intervals.
1717. You are not very familiar with Wilson’s Promontory, and the islands and rocks about it? No. I have been once or twice through there.
1718. Do you know the coast of Tasmania at all? No.
1719. Have you ever been through Banks’s Straits? I have, once or twice, but not to make any particular remark as to them, or the proper position for a light in the straits.
1720. Have you any further suggestions that you would like to make to the Board with respect to the erection of lighthouses anywhere? I think the feeling amongst ship masters is universally in favour of having the coast lighted thoroughly. I should not have hesitated to pay £10 or £20 a year myself to have additional lights on the coast, and I have spoken to many shipmasters who are of the same opinion. I think the lighting of the coast would be well supported, without the slightest murmur, and that any additional expense would be readily borne by masters and owners of vessels. Harbour lights at Warrnambool and Port Fairy are very much needed; their cost would be readily borne by masters trading there. *[The Witness withdrew.]*

Captain George Kelly examined:—

- Captain G. Kelly. 1721. Do you now command the “Monarch”? Yes.
1722. Trading between Sydney and Melbourne? Yes.
1723. Have you commanded other vessels in the colonial trade? Yes.
1724. For about how many years? For seven years I have been in command of vessels here.
1725. Between Melbourne and Sydney? Yes.
1726. Have they been all sailing vessels? Yes.
1727. During these seven years has your experience pointed out to you many points on the coast which you had to travel round which appeared to you to require to be lighted? Yes, there are two or three points where it would be very advantageous to have a light.
1728. In coming from Sydney or in going from Cape Howe to Sydney are there any points along that portion of the coast which in your opinion require to be lighted? Yes, there is one place I think which would be better for having a light, that is Cape George, at Jervis’s Bay head.

1729. Have you found, in proceeding to the northward, bound to Sydney, any considerable indraught, particularly off that point? No, I cannot say that I have, except when there is a heavy swell in from the south-east. I have frequently been set into Wreck Bay with a south-easterly swell; and the land is very low there and you cannot see it on a dark night; I have frequently made the land on the starboard bow when I anticipated making it on the port bow, and in two or three instances it has been as much as I could do to weather the cape.

1730. If you had made the land during the night you might have lost your vessel if you had been unable to see the land on your starboard board? Yes; even with light winds a vessel will scarcely come round.

1731. Are you aware that several vessels have been lost in Wreck Bay? I do not know of any having been lost in my time.

1732. You think that a light upon Cape George would be a considerable advantage to vessels trading between here and Sydney? I think so.

1733. On which point would you recommend the light to be placed—on Cape George or upon Point Perpendicular? Cape George I think would be the best.

1734. How would that show in coming from the northward—would not the height of the land on Point Perpendicular shut out the light on Cape George? If you were very close in shore it would, but otherwise it would not.

1735. Have you ever found the same difficulty in rounding the cape in coming from the northward that you have in coming from the southward? Never.

1736. After passing Cape Howe, which is now sufficiently lighted, what is the next point coming towards Melbourne that you would consider requires to be lighted? Nothing nearer than the promontory.

1737. Do you consider that the promontory ought to be lighted? It would be a great advantage, more so than at Cape George I think.

1738. The navigation of the neighbourhood of the promontory is rather intricate, is it not? It is.

1739. Have you at all considered where you would place the light, if you decided upon placing one in the neighbourhood of the promontory? Yes; the Rodondo would certainly be the best place to put it for the position of it, but I think it would be impossible to place a light on the Rodondo, it seems inaccessible all round it. If it were possible to erect one there it would be decidedly the best place.

1740. But if the engineering difficulties there were insuperable, where would be the next best position to place the light? I think the next best place would be the Ten-foot Rock, because you could see it from both sides then. If a vessel got in amongst the Seal Islands she would see it, and from the other side of the promontory, if you were in between the Liptrap and the promontory, you could see it.

1741. Have you ever gone near enough in passing through the straits to express an opinion whether the Ten-foot Rock is a practicable position on which a lighthouse could be erected? Yes, I have been often close to it.

1742. Have you ever landed on it? No, but I have been very close to it.

1743. Does it appear to you to have sufficient base on which a lighthouse could be erected? I think so. There is a very good foundation for one, but there is not much of it above water.

1744. Have you any idea of the area of it? I have not; but I should say it is not less than from 300 to 400 yards in circumference—that is the rock that is level with the water; the one out of the water is not so large.

1745. Have you ever observed whether the sea breaks with any considerable violence over the rock? It does over the lower one—that is a wash with the water; but the other one I have never seen covered.

1746. You never saw the green sea over it? No; not over the top of it. I think a lighthouse would be safe enough on it in any weather if it was built on the upper rock.

1747. And that position you think would be the very best in which a lighthouse could be erected? I think so.

1748. That would answer for vessels coming from either the eastward or the westward? Yes; if it was put on Cleft Island a vessel would not see it in coming from the northward.

1749. Supposing the Ten-foot Rock and the Rodondo were both found to be impracticable, would Cleft Island be the next best place? It would be rather an awkward place, for it would be perfectly useless for vessels coming from the eastward; there is another island which I think would obstruct the light.

1750. You think the island inside the promontory would shut out the light from a lighthouse erected on Cleft Island? Yes.

1751. Have you ever considered whether the promontory itself would answer for the erection of a lighthouse, or whether the light there would be shut in by any of the islands? I do not know any part of the promontory where you could see it on both sides, and it would be too high to erect it on the top of the hill. If it was erected on Cape Wellington it would be useless for vessels coming from the westward, and if erected on the western side of the promontory it would be useless for vessels coming from the eastward, as it would be entirely hidden by the other portions of the promontory. I think a light on the promontory would be more useful to coasters, as large sailing vessels coming from England usually steer for Kent's Group.

1752. Do they not do that because there is a light there? No; I think they do not like to get into the promontory, because there is a strong current between the promontory and the Rodondo, and it is rather an awkward place for a large vessel to get into.

1753. A steam ship at all times would take the route by Wilson's Promontory, would she not? Yes; I should imagine so.

1754. If the great line of ocean steamers were again established would they not take that route? I should think they would.

1755. Can you make any suggestion to this Board, in case it is found impossible to put a light

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- light on the Rodondo or the Ten-foot Rock, as to what would be the most desirable way of lighting the passage round Wilson's Promontory? I should say the Ten-foot Rock would be the best place.
1756. But supposing the difficulty of erecting a lighthouse there to be so great that it could not be erected? I should not imagine there would be any difficulty about it; there are lighthouses erected on the English coast in much worse positions.
1757. The Rodondo is generally clear, is it not? Yes; it is very high; I have frequently passed it and could not see the upper part of; there is a kind of fog settled on it.
1758. In passing from the promontory down to Melbourne, are there any points on that coast which strike you as being also requisite to be lighted? Yes; there is a place where a light would be very useful, where we should very often save a passage when we do not get one—that is Cape Schanck.
1759. Would a light there be of considerable use to vessels proceeding from the eastward? Yes, both for vessels bound from Hobart Town and from Sydney. I have heard masters of Hobart Town vessels speak of it, and I myself have felt the want of it.
1760. Are not the lights at the Melbourne Heads difficult to make out until you open them in a particular point? Yes, until you are close to them.
1761. Are they not shut in by the high land of Point Nepean? Yes, they are only open for a few points. You can see them better if you are coming round the Otway, but in coming from the eastward we cannot open them until we are almost in a line with the entrance.
1762. Then you think that Cape Schanck would be an important position for a light? Yes, I think it would be more important in fact than the promontory.
1763. Have you ever been through the straits to the eastward, between Cape Otway and King's Island? I have, but it is some time ago, so that I cannot say anything at all about it.
1764. Have you ever given your consideration to the matter of any light being necessary on King's Island? I have not. I cannot say anything at all about it.
1765. Can you give an opinion, as a nautical man, without any positive knowledge of King's Island, whether you think it desirable that a light should be placed there or not? I have not the slightest doubt it would be advantageous to vessels to have a light on King's Island.
1766. You do not think it would have a tendency to lead strangers into danger? I think any stranger, whoever he might be, bound from the westward, would always run for the Otway in preference to King's Island, even if there was a light on both.
1767. You would consider the light on King's Island more in the shape of a warning beacon, and not as a leading mark? Exactly.
1768. And merely to be useful in case of having been driven to the southward out of his proper position, when intending to make the Otway? Yes; I remember a steamer being lost on King's Island, I think, or getting ashore there, the "City of Melbourne," some few years back.
1769. That was on the east side? Yes.
1770. And in an easterly gale? Yes.
1771. Do you think any light would have saved her? I think so, although there are times of course when a light would not be seen; but still it might have been the means of saving her.
1772. Do you think that instead of standing to the southward she might have stood to the northward? Yes; if she had seen the light she might have gone about on the other tack.
1773. Have you ever been to the westward of Cape Otway? Yes.
1774. Have you ever been to Portland? I have been to Portland.
1775. Have you ever considered whether it would be more advantageous to place a light upon Cape Bridgewater or upon Cape Northumberland? It is a long time since I was down that way, and I remember very little of the coast to the westward of Cape Otway, so that I could not form any opinion upon that at all.
1776. Of all the lights that you have spoken of as being requisite to be erected, if only one were to be erected, which would be the first you would recommend to be put up? Cape Schanck.
1777. Is that merely with reference to coasting vessels, or with reference to the general navigation of the straits? The general navigation of the straits. It would be useful for all vessels, no matter where they were going from.
1778. Do you think that it would be of any service to a vessel bound through the straits direct to Sydney? No; but it would be extremely useful to all vessels bound to Melbourne. I do not think it would be of any service to any other vessels except those bound to Melbourne; but it would be serviceable to vessels bound from the westward to Melbourne.
1779. And it would be of service to all vessels bound to the westward through the straits? Yes, if they were tacking about it might be. Western Port has been not unfrequently mistaken for Port Phillip. I know one vessel which run into Western Port and the master thought it was the entrance to Port Phillip Bay, and she lost both her anchors.
1780. Have you any other suggestions to offer to the Commission? No. I think those three points would be the only points on which lighthouses would be necessary on that part of the coast.
1781. Do you think a light on Cape Northumberland, one on Cape Schanck, one on the promontory, and one on Cape George would be of as much importance as a light on King's Island? Yes, I think they would.
1782. Would you recommend the erection of those lights prior to the erection of a light on King's Island? Yes; I think they are of more consequence.
1783. And more important than King's Island? I think so. A vessel is never down on King's Island except when she is driven down by stress of weather, and in the other instances the lights would be in the regular route where vessels are constantly going backwards and forwards.
1784. Have you ever considered the question of putting two lighthouses, the one on the east  
and

and the other on the west side of Wilson's Promontory? No, I have not considered that, because I did not think it likely that the Government would erect two because of the expense; two, of course, might be put in very good positions to answer both ways, but if one was erected on the Ten-foot Rock it would answer the purpose of both.

1785. But supposing that to be impracticable, what points would you select for two light-houses? Two points on the promontory.

1786. You would put them on the main-land, one to the eastward and the other to the westward? Yes; on the south-west and south-east angles of the promontory, because then you could see them from any position; and even then a light on the east side of the promontory would not be of so much use as a light on the Ten-foot Rock, because you could not see it so far in as the Seal Islands then. [*The Witness withdrew.*]

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Captain Edward Reynell examined:—

1787. You command the "True Briton"? Yes.

1788. How many voyages have you made to Melbourne? This is my first voyage.

1789. Your first voyage to the Australian Colonies? I have been to New Zealand on several occasions.

1790. This is the first time you have come into Bass's Straits? Yes.

1791. Did you see the Otway light in coming in? Very distinctly.

1792. If a light had been placed on King's Island would you have endeavoured to make it? Certainly not. I am of opinion that the only service of a light on King's Island would be in the event of a vessel being driven down there in stress of weather, to warn her she was so near the land.

1793. As a running light you think it would be of no service? Certainly not in coming to Melbourne. I think it might be of service to a vessel going through the straits to New South Wales, because they would endeavour to keep in the mid-channel.

1794. As commanding an over-sea ship coming to Port Phillip, you would decidedly make for the Otway? Undoubtedly.

1795. In approaching the entrance to Port Phillip Heads, do you think any additional light would be desirable? I made Cape Otway late in the night, and had a sight of the land all day coming up, so that I could hardly say.

1796. Then you did not see the Shortland's Bluff lights? No; I came in just at one o'clock in the day. No doubt the lighthouse at Cape Otway is of great service, and a very good light.

1797. In coming from the westward, do you think a light upon Cape Northumberland would be of any service to vessels bound to Melbourne? I think it would, because if you were not certain of your chronometer, and you had not had any lunar observations, you would naturally endeavour to make the land a little to the northward that you might not miss it altogether, and therefore it would be of service.

1798. Would it be of any service to vessels beating up the coast? Most assuredly, for you would be standing on and off the land.

1799. Have you ever sighted Cape Northumberland? No.

1800. As a general rule, the first land sighted by a prudent navigator would be Cape Otway? Decidedly. I think a light on King's Island would be of service, to give a vessel warning that she was approaching the land, and enable her to take means to get off the coast.

1801. You think a light would be calculated to warn a ship of the dangers that there are on the north end of King's Island, and enable her to avoid them? Yes. [*The witness withdrew.*]

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Captain Francis Rozea examined:—

1802. Do you command the brig "Wanderer"? Yes.

1803. Where do you trade from? Between here and Sydney.

1804. Have you been long engaged in that trade? About five or six years.

1805. Trading between Melbourne and Sydney all the time? Yes.

1806. Has it ever appeared to you, in your voyages backwards and forwards, that there was any light requisite on the coast of Australia, after passing Cape Howe? My opinion is that there ought to be one at Jervis's Bay.

1807. You think either Cape St. George or Point Perpendicular ought to be lighted? Yes.

1808. Have you ever found your vessel set more into the land there than you expected? Yes; three times I have been served the same way with easterly winds.

1809. What do you attribute that to? To the swell setting in; and there is an indraught round the head.

1810. If you were thrown into that bight during a dark night, as the cape is at present unlighted, would you be likely to lose your vessel? Yes.

1811. A light there would warn you of your danger? Yes.

1812. Is there any other part of the coast between Sydney Heads and Cape Howe which you think deserves consideration with respect to lighting? No. If there is a light on St. George's Head, or anywhere about Jervis's Bay, I think the coast will be very well lighted from Sydney to Cape Howe.

1813. After rounding the Howe, is there any point which you think ought to be lighted between there and Melbourne? The promontory; and there are only two positions where you could get a light there to do any good on both sides—those would be the Rodondo and the Ten-foot Rock.

1814. Have you ever approached the Ten-foot Rock? Yes; I have been often on both sides of it.

1815. Do you think a lighthouse could be erected there? Yes, I think so, after the cavities were filled up. It is a very broken surface; I do not think the cavities are very deep.

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1816. Do you think that those cavities could be filled up, and sufficient base be formed to build a lighthouse on? I think so.
1817. Have you ever observed whether the sea breaks over that rock? I have seen it run pretty high on it, but I never saw it break over.
1818. Have you passed it in a westerly gale? Yes.
1819. Do you consider the Rodondo to be inaccessible? I have been quite round it, and I cannot see where a vessel could land.
1820. Have you ever examined Cleft Island? Yes.
1821. Have you considered whether a light might be efficiently erected on that island? It would be no good coming from the eastward; it would be shut in by the promontory. It would be of service after you opened the promontory; but it would be of no good, coming from the eastward, until you opened the promontory, and then a light on the promontory would be as good.
1822. You think a light on the Ten-foot Rock would be open on both sides? Yes.
1823. Do you often sight Kent's Group? Occasionally, but not without I am driven down by westerly winds.
1824. Usually vessels bound either eastward or westward hug the promontory, do they not? Yes.
1825. Sailing vessels as well as steam vessels? Yes.
1826. If you commanded a large ship would you hug the promontory? So well acquainted as I am with the coast, I should; I cannot say that as a stranger I should. You are sooner out of the dangers, if you have a commanding breeze going round the promontory, than going down to the southward.
1827. After passing the promontory, and bound to the westward, are there any other points on which you would advise a lighthouse to be erected? On the Schanck, decidedly; I think a light is required on the Schanck more than anywhere else.
1828. That is more with reference to the trade with Port Phillip? Yes; and it is a very good mark for vessels bound to the westward, to Adelaide and that way.
1829. Do you think a vessel bound to Adelaide would come so far northward as to sight it? Yes, if the light were of any range at all; and in thick weather they would try to make that light, and take their departure from it. If you have the wind south-westerly or south-erly, you are obliged to get as much fling as you can. If you get set into Western Port there is no getting out again. The tide runs in there very strongly, and strangers coming from the eastward are apt to take the land at Western Port for the Otway land, and run right in and lose the vessel.
1830. Do you think it would be a useful light for vessels passing through the straits not bound to Port Phillip—that is, working through the straits, bound to Adelaide or India? Yes; it would give the masters of ocean vessels more confidence when they had a light there, and they would stand across the straits.
1831. You would recommend a light of sufficient power to be seen at a considerable distance? Yes; I should say a radius of twenty miles would be sufficient.
1832. A first-class light? Yes; vessels coming from Van Diemen's Land all try to make the Schanck.
1833. Then you are decidedly of opinion that a light on Cape Schanck is very desirable in every way? Yes.
1834. Both as a highway light and as an entrance to Port Phillip? Yes; in coming from the eastward, we do not see the Shortland's Bluff lights until we open them off Point Nepean.
1835. Have you frequently been into Port Phillip Heads? Yes, constantly for the last six months.
1836. Are the lights there well placed? They are, as a leading light; but they are of no use until we approach the heads.
1837. A light on Cape Schanck would give you great confidence? Yes.
1838. Do you think the Shortland's Bluff lights are not powerful enough? As leading lights they are very well placed, but you cannot see them far outside the heads.
1839. Are you familiar with the Cape Otway light? No.
1840. Have you ever seen it? I have seen it.
1841. Have you ever been to the westward of it? No.
1842. What is your opinion about a light being placed on King's Island? I never sighted it but once, when I got driven down there in a north-westerly gale, and I cannot give an opinion upon that.
1843. Would not a light there have been of service to you then? If it had been night it might have been, but it was in the day-time. I think it is requisite to have a light there more as a safety light than as a leading light.
1844. Are you familiar with Banks's Straits? No.
1845. Or with the coast of Tasmania? No; all my-trade is between Sydney and Melbourne.
1846. Supposing it is not practicable to put a lighthouse on the Ten-foot Rock, what point near the promontory would you next recommend as being desirable? The Cleft Rock it would be impossible to put one on; I think it is inaccessible, or else that is the place where I think it would be desirable to have one; because, if you had it on the pitch of the promontory, it would be more liable to lead vessels coming from Port Phillip into danger than out of it, because it would lead a man amongst the islands, if he was not very well acquainted with the position of them.
1847. Supposing there were one put on each side of the promontory, where could you put them? One on the south-east point, and one on the Glennie Islands; because he could take across from the Glennies until he opened the other one out, and then shape his course from that again.
1848. Would it be possible to put a light on the Glennie Islands? Yes, quite easy; there would be good landing, and plenty of stone and everything.

1849. Will you point out which particular island you would suggest? The westernmost of the Glennie Islands. The only useful place, unless you had two, would be either the Ten-foot Rock or the Rodondo, and that is inaccessible.
1850. Of course you have seen Cleft Island? Yes.
1851. Is it very high? Yes.
1852. What height should you estimate it at? I should say about 200 feet, or more.
1853. Supposing it was accessible, a light might be placed on that island 200 feet high? Yes, if it could be placed there.
1854. In coming down from the eastward from Cape Howe, would you not open the light on Cleft Island clear of the promontory, a long way before you got to the promontory? Not without you were a long way to the southward; you must have it bear west before you open Cleft Island.
1855. Did you ever land on the Ten-foot Rock? Never.
1856. Have you ever made King's Island? Yes.
1857. Under what circumstances? In northerly gales.
1858. When bound where? When bound to Melbourne.
1859. Have you ever considered whether any advantage would be gained by having a light there? I have never been knocking about there. Of course it would be a great guide to a person if there were a light on the northern end of it, but I should not like to express an opinion upon it.
1860. Have you any further suggestions to offer to the Commission? No; I think lights at those three points would be all that would be necessary—Cape St. George, Wilson's Promontory, and Cape Schanck; and Cape Schanck, I think, before any of them. [*The Witness withdrew.*]

Captain F.  
Rozen.

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Captain William Shepherd examined:—

1861. What ship do you command? The "Euphemia."
1862. Where does she trade to? Hobart Town.
1863. Have you been in any other trade? The Port Albert trade.
1864. Have you been further to the northward than Port Albert? No.
1865. Or to the westward of Port Phillip? Yes; I have been to Portland Bay and Port Fairy.
1866. Then you have a competent knowledge of Bass's Straits? Yes.
1867. How long have you been in the Hobart Town trade? Ever since 1839.
1868. Trading between Melbourne and Hobart Town? Trading between Hobart Town and Port Albert the principal part of the time, and latterly between Hobart Town and Melbourne.
1869. Have you repeatedly passed through Banks's Straits? Yes.
1870. Are they well lighted? As far as the straits themselves go they are; the Goose and Swan Island lights are very good lights.
1871. And sufficient for the purposes of navigation? Yes, for where they are.
1872. Have you ever felt the want of a light on the eastern coast of Tasmania? Very much so.
1873. About what point? I should say the Eddystone Point would be the best position for a light.
1874. Between the Eddystone and Cape Pillar is there any necessity for a light? No.
1875. Do you think a light upon the Eddystone would be useful to any but coasting vessels? It would be useful to any vessel from New Zealand, or from the eastward; if they were coming through the straits, to come to Melbourne from the eastward, they would very often make that light.
1876. You would recommend a light on the Eddystone, as being useful to navigation generally? Very much so, I think myself it is the only place where there is any danger on the east coast of Van Diemen's Land at all; it is almost the easternmost point and would just get you clear of all the islands in the straits; in running down the east coast of Van Diemen's Land you can go no further on that course than the Eddystone Point, if you happen to run a few miles too far you are apt to run right ashore on Cape Barren.
1877. What is your usual line of course in coming through Banks's Straits, bound to Port Albert or Melbourne, and what lights do you generally sight? In westerly weather, which is the prevailing wind, we generally sight the Curtis', we keep as near Van Diemen's Land as we can and it is very seldom we sight Kent's Group unless we are driven there.
1878. The usual course with westerly weather is to keep along the north coast of Van Diemen's Land, and to stand across and try to make the Schanck? Yes; that is generally what we try to make, and with south-west or westerly winds we are forced to keep off as far as we can to make the westerly shore, because we do not like to get down on the shore with a south wind because of the lee shore and the indraught into Western Port. If bound to Port Albert we steer from the Goose Island to Kent's Group.
1879. That is your starting point? Yes; in coming through Bass's Straits we generally start from Goose Island and steer a straight course right across.
1880. Is there any part of the coast which you make after passing through Banks's Straits bound to Melbourne which you consider it would be very desirable to light? I think it would be very desirable to light the Schanck.
1881. For all vessels? For all vessels coming to Melbourne, let them be bound from which way they will, either coming from the westward or the eastward; vessels may not see the head lights at all, and then they would stand over until they saw the Schanck.
1882. Do you think the Schanck an important light to be erected at once? I think more so than any other.
1883. The head lights, you state, are not always visible until you get pretty close in? No.

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1884.

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1884. They are no considerable altitude, and therefore are not seen a great way off? Vessels would see them a long way coming down from the westward, but not from the eastward.
1885. If you made the Schanck during the night, would it enable you to take up your position so that you could run with safety for the Shortland's Bluff light, and not get too far to leeward? Yes, in any weather.
1886. It would give you great confidence in approaching Port Phillip at night to have a light on the Schanck? Yes, you could always steer then right for the heads.
1887. Are the Shortland's Bluff lights well placed as leading lights? I think they could not be placed better as leading lights.
1888. What is the greatest distance you have seen them off? I have seen the high light about twelve miles off; in fine clear westerly weather you may see it as much as fifteen miles.
1889. In going to Port Albert from Van Diemen's Land is there any point that you think requires lighting? I do not remember any place where a light would be requisite for vessels bound to Port Albert after you leave Kent's Group with the exception of a light on the promontory.
1890. Do you think a light is desirable on the promontory? A light on the promontory would be a great benefit to all vessels bound to Port Albert, or for vessels bound from the eastward coming to Melbourne.
1891. And to vessels from the westward going through the straits? Yes.
1892. Are you familiar with Wilson's Promontory? Yes.
1893. Have you landed on it? I have.
1894. In what position would you advise that a lighthouse should be placed? If a lighthouse could be erected on the Ten-foot Rock I do not see a better place for it, but I am afraid it could not be erected there. It might be with a great deal of trouble.
1895. What size is the Ten-foot Rock? I should say, that as far as it above water, it would not be more than about 300 yards round.
1896. How high does it stand out of the water? I should say somewhere about twenty feet.
1897. Have you ever seen the sea break over it? In heavy south-westerly gales of wind I have seen the sea go right over it.
1898. Sufficient to carry away a lighthouse? No; I have seen the wash and froth of the sea go over it.
1899. Merely the spray or the body of the water? Only the top; the white of the water.
1900. Not the green sea? No.
1901. Do you think a heavier sea would go over it in a heavy westerly gale than would go over the Eddystone in a south-west gale in the English Channel? No; nothing like it.
1902. Do you know the Rodondo? Yes.
1903. Is that accessible? Yes; the sealers used to live on it at one time I can remember.
1904. Do you know any man that used to live there? The pilot's man that used to be in Port Albert buried a man on it, and used to live there. There is a large cave on it where they used to kill the seals, and Long Tom, who used to be a pilot in Launceston, scaled on it. Captain Bently can tell you a great many that scaled on it. They used to land on it in fine weather in a boat, and they used to stop there until such time as they could get an opportunity of getting away again.
1905. It is very high, is it not? Yes.
1906. Do you think it would be too high for a lighthouse? I think it is; if it were not for the height of it I think it would be the best place in which a lighthouse could be put. But in north-easterly weather I think it would be very difficult to see it; it would be capped, I think; in easterly weather we very seldom see the top of it now. I do not think a light there would be seen one time out of twenty when it would be needed the most, because in clear weather it is so high and bold that is no matter whether there is a light on it or not.
1907. Do you consider the promontory as an important point to be lighted for the navigation of the straits generally? I should say it would be a very good thing to have a light there to warn vessels from going close in, particularly vessels bound from Sydney.
1908. A light on the promontory would not be any advantage to over-sea vessels bound from England or India through the straits to Sydney or New Zealand, would it? Yes, I think it would be very much so; many times in thick easterly weather they would not see the Kent's Group at all, and then coming through between Kent's Group and Hogan's Group they would be able to see the light on the promontory as they came up to the westward.
1909. Then you would advise a light on the Schanck and on the promontory also? Yes.
1910. Do you consider those the most important lights that should be erected at once? I do not see at the present time any points where lights would be more advantageous on the same line of coast.
1911. Do you think a light on the Eddystone equally necessary? It would be a great benefit, particularly to coasting vessels.
1912. Have you ever been round the Otway to the westward? I have been to Portland Bay and Port Fairy.
1913. Have you been to Adelaide? No.
1914. Have you ever considered the necessity of a light on that part of the coast near Portland? When I went up to Portland, I went round the west side of Van Diemen's Land, and we made the land a long way up to the westward of Portland.
1915. Do you think a light would be serviceable on Cape Northumberland? I think it would be very serviceable to all large vessels coming from the westward.
1916. Do you think English vessels would sight Cape Northumberland? A great many of them would.
1917. In the summer season with easterly winds, do you think they would be likely to sight it? I think they would.
1918. Do you think Cape Northumberland would be a preferable position for a light to Cape Bridgewater? The two places are so close together I think it would not make much difference



difference which it was at. A light there would be very useful for vessels bound to Adelaide, or large vessels coming down from Adelaide here.

1919. You think it would be equally useful for coasters and over-sea ships? Yes, and it would be very useful for vessels beating round the Leeuwin.

1920. Bound to India? Yes.

1921. Have you ever sighted King's Island? Yes, many times.

1922. Have you ever considered the question of that island being lighted or not? When we come round from Van Diemen's Land we very often come round to the westward, and I think a light on King's Island would be very useful.

1923. Even for the Hobart Town trade? Yes.

1924. You sometimes come round the south-west cape? Very often, and we very often go round from here that way.

1925. Have you approached the land frequently and seen it? Yes; I always go down inside between the Hunters and the south end of the island.

1926. What part of the island would you recommend to be lighted? I think the south end, on account of the Otway light being on the other side of the channel.

1927. That would be only serviceable to vessels passing round the Hunter's Channel? It might be put more to the south-west.

1928. What use would that be to over-sea vessels bound through the straits? It would be of no use to them except as a land mark.

1929. Would a light on Point Wickham be of use to you in proceeding to Van Diemen's Land? No.

1930. You pass through from the eastward generally? Yes.

1931. If the wind were blowing strong from the eastward, and you passed to the westward of King's Island, would not a light then on the north end of the island be of considerable advantage to you? Yes.

1932. And would it not even in passing to the eastward enable you to take up your position and to pass through the straits with safety? Yes.

1933. If you were running with the wind to the eastward, and got your departure from a light on the north end of the island would it not enable you to run with safety? Yes; from the eastward, but it would be no benefit to any vessels from the westward trying to go in that way.

1934. But if bound from Melbourne to Hobart Town passing either on the east or west side of King's Island, would not a light on the north end of the island be a considerable advantage? Yes; as a mark going either way.

1935. And would it not also be of advantage if you wanted to take shelter under the island, also in a heavy westerly gale, by enabling you to pick up your position? Yes; it would be of use either in a heavy westerly gale or a heavy easterly gale.

1936. For your particular line of trade, coming up from the southward, you would like a light on the south end of King's Island? Yes; I should like it more particularly there.

1937. Have you observed whether the land on the north end of King's Island is clear or clouded usually? I have never seen it except in very heavy south-west thick weather when it is clouded, it is not so high that it ever gets capped.

1938. Is it liable to be more clouded than any other high land of a similar description? No, I think not. I have seen it a great many times and been round it a great many times.

1939. Have you any further suggestions to offer to the Commission? No.

1940. The two lights you think desirable are one at Wilson's Promontory and one at Cape Schanck? Yes, as far as the Australian Coast goes, and one on the Eddystone Point for the Tasmanian trade. [*The Witness withdrew.*]

Captain William Watts examined:—

1941. You are Commander of the "London" steamer? Yes.

1942. You formerly commanded an ocean steamer belonging to the General Screw Company? Yes, the "Hellespont."

1943. And you made some voyages through Bass's Straits in that vessel, did not you? Yes, one.

1944. Since that what trade have you been principally engaged in? The trade between Sydney and Melbourne.

1945. How many voyages have you made in the "Hellespont" and in the "London" between Sydney and Melbourne? Between sixty and seventy.

1946. Then you have a tolerably good knowledge of the navigation of the straits and also of the coast of New South Wales? Yes.

1947. Between Port Jackson and Cape Howe are there any points of land which create difficulties in the navigation, either in going from the southward or coming from the northward which, in your opinion, require to be lighted? Yes, there is one close to Jervis's Bay, Cape St. George.

1948. Have you found difficulty in going from the southward in the way of an indraught there that frequently has required you to alter your course a point or two to the eastward? Very frequently. We steer one course one voyage and find ourselves many miles outside, and steer the same course another voyage, and find ourselves close in. I have had to haul out four points.

1949. Then a light on that point is, in your opinion, absolutely necessary? Yes, absolutely necessary.

1950. Are you aware that some vessels have been lost by not being aware of that indraught? Yes; it was impossible for them to get out of Wreck Bay.

1951. Is it on Cape St. George that you would recommend a lighthouse to be erected? Yes.

Captain W.  
Shepherd.

11 Aug., 1853.

Captain W.  
Watts.

11 Aug., 1854.

- C. G. W.  
W. G. W.  
4 Aug., 1836.
1952. Do you think that point would be seen sufficiently in coming from the northward as well as in going from the southward? Yes, unless a vessel were very close in.
1953. If a light were erected on Cape St. George, would a vessel in standing to the southward keep a sufficient offing, so as to open the light without interfering with the land on Point Perpendicular? Yes, by giving it one mile of offing you would go clear of everything.
1954. But in going from the southward the greatest benefit would arise, because the indraught sometimes is excessive and sometimes there is none at all? Yes.
1955. Have you had opportunities of judging of the Gabo Island Light? Yes.
1956. Do you consider that that light is properly placed? Very much so.
1957. Is it sufficiently high and brilliant? Yes, I think it is quite sufficient for all the purposes that are wanted.
1958. What distance have you seen it? Fifteen or sixteen miles, and perhaps a little more than that on a clear night.
1959. After passing that light is there any dangerous point at the entrance of the straits that, in your opinion, requires to be lighted in proceeding to Port Phillip? Yes, I think it would be advisable to have a light on or about the promontory.
1960. Can you from your own experience, point out any spot that would answer the purpose? I think the promontory itself appears to be the best position.
1961. But in that case you could only light it on one side? Yes, that is all.
1962. On which side of the promontory would you put the lighthouse? On the extreme point.
1963. Do you think that would be visible in coming down both from the eastward and the westward within a sufficient offing? No; a vessel coming up close to Cape Liptrap would have it shut in by the Glennie Islands until she got nearly in a line with it. The promontory projects out about three or four hundred yards from the main land, and that would not be too high to erect a lighthouse upon.
1964. Is that point to the eastward or westward of the promontory? I should say they bear from each other east and west.
1965. Then a light there would be distinctly visible in coming from the eastward? Yes.
1966. But would be shut in, in going from the westward? Yes, by the Glennie Islands.
1967. Do you think it is more important that it should be open to the eastward than to the westward—would there be less danger in a vessel running from Melbourne Heads than in running from the eastward? Much less danger.
1968. You would rather have it open to the eastward than open to the westward? Yes.
1969. Have you ever considered the position of the Ten-foot Rock? Yes, I have noticed it several times; it is laid down in the chart too near the promontory, it is more in a line with the Monocœur and Rodondo.
1970. Then it is not laid down far enough south? It wants to go further to the southward and westward; it is nearly in a line with the Monocœur and about one and a quarter mile from the Rodondo; it is laid down in the chart as being two miles.
1971. Have you ever considered whether that would be a good position for a lighthouse? It would be the best position, but I do not think it would be practicable to put a lighthouse there.
1972. Have you ever passed it when the sea has been washing over it? Frequently.
1973. Have you ever seen the green sea going over it? I have seen the spray going over it ten feet.
1974. What is the height of it at the highest part? I should say from twenty-five to thirty feet; it is only a small portion of the rock that stands that height.
1975. Sufficient for the base of a lighthouse? Yes. It is a square stone, I should say about ten yards each way.
1976. But you think it would answer all the purposes if a lighthouse were erected on the southernmost point of the promontory? Yes.
1977. Is not the land on the eastern side of the promontory very high? Yes.
1978. Would a light on the promontory be quite obscured in coming down from Cape Howe? No; you can see the promontory in six fathom water; it is open a long way inside the Seal Islands.
1979. Do the steamships ever go inside the Seal Islands? Never.
1980. And any vessels coming outside the Seal Islands would sight a light on the high part of the promontory? Yes.
1981. Have you ever considered the position of Cleft Island as a site for a lighthouse—can that be seen clear of the promontory in coming from the eastward? No, you cannot see it until you are past the promontory, and then it is covered by one of the other islands.
1982. Is there any island that is visible to the eastward of the promontory until you get the island to bear nearly west of you? When you get the promontory to bear north and one of the small islands west, then Cleft Island is partly shut in.
1983. Is the island that opens out when you get the promontory to bear north accessible at all or suitable for a lighthouse? Not any better than the promontory, because you would not open a light on it until you were past the Cleft Island.
1984. Therefore it would be of no use any more than the promontory in coming from the westward? No.
1985. Would you consider that a light on the promontory would afford all the advantages you would require for navigating that channel? Yes.
1986. Both coming from the eastward and from the westward? Yes.
1987. The radius of vision would be about equal from the westward and from the eastward? Yes.
1988. In steering your course from Melbourne, how do you come down after passing the Schanek—how near to the Glennie Islands do you pass? We make them about a mile off Cleft Island.
1989. You pass about a mile to the south of Cleft Island? Yes.

1990. That course would enable you to pass the promontory lighthouse, would it not? Yes, and as soon as the promontory lighthouse was opened we should steer direct through.
1991. It would be a mark as soon as you opened the lights; you could run each way and in your direct course? Yes.
1992. Do you often sight Kent's Group lights? Very seldom.
1993. Steam vessels always use the promontory passage? Yes.
1994. Would the ocean steamers in coming from England or India use that passage past the promontory in preference to going through by Kent's Group? Yes; there is nothing in the way except the Ten-foot Rock.
1995. Then really the promontory would be just as serviceable for the ocean navigation as for coasters? Equally so.
1996. Supposing a light to be placed on the promontory itself, when would a ship coming down from Port Phillip first see it? Soon after passing Cape Liptrap; she would see it in between the islands and she would soon know whether she was clear of Cleft Island by the bearing of the light.
1997. It would be a leading light? Yes.
1998. Would that be of use to sailing vessels as well as to steam vessels? I think it would; it would likewise point out a fine anchorage at night in Waterloo Bay if they were in distress, or they might run round the promontory and there lie in shelter.
1999. In proceeding towards Port Phillip, what is the next point on the coast that you consider requires the attention of the Government? I think the Schanck requires attention. I have met ships that have over-run their port frequently in coming down from the Otway bound from the westward.
2000. Have you ever fallen in with vessels that have over-run the port? I fell in with one of the mail ships, the vessel that came in before the "Joseph Tarrett." She ran close in Western Port, and found that was the wrong entrance, and then she ran down to the eastward, and I fell in with her down to the eastward.
2001. That would not have been the case if he had had a Schanck light to guide him? No; masters of vessels are very fearful of running down into the bight at night.
2002. Which of those lights that you have now mentioned would you consider it would be desirable first to undertake—the one on Cape St. George, the one on the promontory, or the one on the Schanck? I think the Schanck light would be the most generally useful light, particularly for Melbourne.
2003. Are the Shortland's Bluff lights equal to what they are required for? Yes, they are very good lights indeed.
2004. But you do not open the Shortland's Bluff lights until you get quite clear of Point Nepean, do you? We open them with a north-east bearing.
2005. They are shut in by the high land except at a little break in the land? Yes, there are three or four little breaks that you can see them through in coming from the eastward.
2006. Does any necessity exist in your opinion for a light on Point Nepean? None, whatever.
2007. Has it ever occurred to you that the lights on Shortland's Bluff are not visible for a sufficient distance? I think they are quite sufficient, the high light is visible certainly for twenty miles.
2008. You think they are quite sufficient for all purposes? Yes.
2009. Do you know the Cape Otway light? I have only seen it once.
2010. Will you favour the Board with your opinion upon the question of the necessity or otherwise of a light on King's Island? I can only speak by looking at the chart; I have never seen the island.
2011. As a master of a vessel running for the straits from the westward, as a stranger, knowing that there was a light upon Cape Otway, and no light upon King's Island, would you consider that the navigation of the entrance of the straits would be improved or otherwise by having a light upon both of those headlands? Decidedly improved.
2012. Are you aware that there are considerable reefs that run off the north end of King's Island? Yes.
2013. Do you think a light on that island would tend to lead vessels into danger or warn them of their danger? I think it would warn them.
2014. It is as a warning light you would have a light placed there and not as a running light? Exactly.
2015. You are not familiar with the coast of King's Island? No.
2016. Then you would hardly feel yourself in a position to give an opinion as to where a light should be placed, whether on the North Cape, or on the New Year Islands? I would rather not give an opinion upon that question.
2017. You have never been along the coast to the westward of Cape Otway? Never.
2018. In your over-sea voyages which you have made here, would you, under any circumstances, have thought it desirable to make the land before you made the Otway light? No.
2019. You think, as a general rule, a prudent mariner would steer for Cape Otway? Yes, but it would be all according to whether he had had good observations a day or two before.
2020. The question was put more with reference to the necessity for the erection of a light on Cape Nelson or Cape Bridgewater? I do not know that coast.
2021. When you came out here you went straight for the Otway? Yes.
2022. And that was the first land that you made? Yes.
2023. Do you know the coasts of Tasmania? I have been to Hobart Town once.
2024. Through Banks's Straits? Yes.
2025. Did you pass through the straits in the night? No, in the day.
2026. As you have only made the voyage once, probably you would not like to give an opinion as to the necessity for any additional lights there? No.

Captain W.  
Watts.  
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Captain W.  
Watts.

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2027. Have you any further suggestions to offer to the Commission? I think, certainly, it would be advisable to get a light on Cape Schanck as soon as possible.
2028. That you think there should be no time lost about? No.
2029. Do you think a light on Cape Schanck would be available as a highway light for vessels passing through the straits? Yes it would, very much so. Ships would be able to approach the land and be ready to enter in as soon as the tide turned, whereas now they may lose two or three days.
2030. To a vessel not bound to Port Phillip but proceeding through the straits against a contrary wind, would a light on the Schanck also be a great assistance? Yes. [*The Witness withdr.w.*]

Captain Anthony Enright, examined:—

Captain A.  
Enright.

11 Aug., 1856.

2031. You command the royal mail ship "Lightning"? Yes.
2032. How many voyages have you made to this port? Three.
2033. In command of the same vessel? Yes.
2034. And you have gone home from Melbourne with that ship also? Yes.
2035. In proceeding home which way have you gone? Generally through Banks's Straits.
2036. In coming from the westward bound to Melbourne have you ever considered the dangers that lie in the vicinity of King's Island? I have considered them, and I thought it strange that there was no lighthouse on that Island. The first voyage I came from the southward and westward, and the wind happened to be from the eastward, and, of course, if I had approached Cape Otway I should have been on a lee shore. I approached King's Island and had a very heavy gale of wind, which tore the best part of my sails away, and I was obliged to keep to windward. I was afraid to approach Cape Otway, so that I was obliged to keep in the mid-channel as much as possible, but then I could not keep far enough away from the coast because I was afraid of setting over to King's Island.
2037. Would a light on King's Island have been of very great advantage to you then? Yes.
2038. You had at that time an easterly gale? Yes; it blew very hard indeed.
2039. As a stranger coming to this port you experienced, in your own mind, some astonishment that so important a position as the north end of King's Island should not be lighted? Yes.
2040. And you think it would be advisable that it should be lighted? Yes; because coming from the westward and southward you cannot depend on being within ten miles of your reckoning. I generally try to make Cape Otway, but if the wind is from the eastward you cannot fetch up to Cape Otway, because you would then be on a lee shore.
2041. If there were a light on King's Island you would still make Cape Otway if you possibly could? Yes.
2042. But in the event of not being able to make Cape Otway, and making the land to the southward, you think a light on King's Island would be a considerable advantage? Yes.
2043. You speak in general terms of a light on King's Island, do you mean the north end of the island? Yes.
2044. Have you considered the question of its being placed in any other part of the island? No.
2045. Do you think in coming from the westward in your large ships a light about Portland would be of service—say on Cape Bridgewater or Cape Northumberland? I never tried to make that coast. We generally keep on the parallel of 45°.
2046. And come up in your great circle course? Yes.
2047. And that frequently necessitates your making King's Island? Yes; we haul up as much as north-north-east.
2048. That is sailing on the arc of the great circles? Yes.
2049. What is the highest southern latitude that you touch on that arc if you can keep it? 51°.
2050. Then you would approach the land of New Holland from that latitude coming up north-north-east? We begin to haul up about 35° or 40° east from the cape.
2051. In proceeding to the entrance of Port Phillip, have you experienced any difficulty for want of additional lights there? Yes; as a stranger I did.
2052. Where? Off Cape Schanck. The first time that I came here, reading the directions I found that Arthur's Seat was the most remarkable headland, and by that I found the entrance taking the bearings of Arthur's Seat; I went up aloft and saw the entrance afterwards.
2053. That was because you happened to make it during the daytime? Yes; I lay to during the night, and made it about half-past five in the morning.
2054. Supposing you had stood in during the night you would have been unable to judge of your position and might have been to leeward before you were aware of it? Yes.
2055. A light on Cape Schanck would have shown you your position to a nicety? Yes.
2056. If bound through to Sydney or New Zealand, would you think a light on the Schanck would be desirable? I could not say. I should try to make Cape Otway and shape my course to the Rodondo.
2057. But if you had easterly winds and had to beat through the straits, would it be of service? Yes.
2058. Is not Port Phillip what is called a blind port? It is difficult to enter, but I have always found the Shortland's Bluff lights very good leading lights; so much so that in bad weather if a pilot was not available I should venture to bring my ship in.
2059. In leaving Port Phillip bound home a light at Cape Schanck would be of great service to you, would it not? Yes.

2060. Particularly if bound through Banks's Straits? Yes.
2061. In making the passage round the south end of Van Diemen's Land a light on the north end of King's Island would be of service to you, would it not? Yes.
2062. Are the lights good which you have fallen in with in Banks's Straits? Very good.
2063. Do you think these straits are sufficiently lighted? Yes. I passed through both times at night, and both Swan Island and Goose Island are very good marks in going through the straits.
2064. Have you seen Kent's Group light at all? I have.
2065. Have you ever been through by the promontory? No.
2066. Your impression is, as master of one of the large ocean sailing ships, that if the entrance to the straits were lighted on both sides considerable facilities would be afforded to navigation? Very much so indeed. I remarked to many gentlemen, the first voyage I made, that it was quite backward not having the coast lighted better.
2067. What light dues do you pay in Liverpool? £42 in and out; that includes all the channel lights.
2068. If you were proceeding with the "Lightning" from Port Phillip to New South Wales, what course would you take? I would take the channel close by Wilson's Promontory.
2069. Then, in the event of a light being placed upon Wilson's Promontory, would that form a very valuable leading light for large ships as well as for coasters? Yes.
2070. You have never been round the promontory? No.
2071. But you would have no hesitation in taking the passage by the promontory? No.
2072. Do you know where the "Schomberg" was lost? Yes; just to the westward of Cape Otway.
2073. Then a light upon Cape Bridgewater, or Cape Nelson would not have been of the slightest service to her? No. [The Witness withdrew.]

Captain A.  
Erwigat.

11 Aug., 1856.

Captain William Harrison Lamont examined:—

2074. Do you command the "White Swan"? Yes.
2075. Trading between here and Adelaide? Yes.
2076. In your passages from Adelaide to Melbourne have you ever considered the question of the necessity for a light on Cape Northumberland? Yes; I think it is one of the most necessary lights on the coast.
2077. Preferable to Cape Bridgewater? Yes, much; it is the turning point of the coast there. It is low land, and a very dangerous coast.
2078. It is the point you are most anxious about in passing? Yes; I frequently lose a considerable distance by not hugging it close in the night.
2079. The reefs do not extend a long way out from Cape Northumberland, do they? No.
2080. Do you think a light on Cape Northumberland would be useful to over-sea ships from the westward? I have heard of ships making Cape Northumberland, and on the occasion of the wreck of the "Schomberg" it was given in evidence that she made Cape Northumberland two days before she was wrecked, with an easterly wind.
2081. Do you know any of the circumstances connected with the loss of vessels at Cape Northumberland? No; I suppose they ran on in the night, or in thick weather.
2082. You think a light might have saved them? Yes.
2083. Would a light on the north end of King's Island, at Point Wickham, be of any service to you in coming from the westward? None at all; I never go near King's Island.
2084. You always steer for the Otway? Yes. I keep straight along the coast.
2085. In meeting with strong westerly gales after leaving Melbourne, bound to the westward, would a light on the north end of King's Island be of any service to you? It might; we often have to set sail and stand off when we cannot steam against the sea.
2086. Then you might be able to get under the lee of the north end of King's Island, and make a slant round between the Otway and the north end of the island? We seldom stand so far off; with steamers we generally hug the land.
2087. In a sailing vessel a light on the north end of King's Island would be of great service to you? Yes; I have gone round to the westward of King's Island myself in going home from here. I commanded a ship between here and London for six voyages, and it is a very desirable point to have a light upon. I never made King's Island in coming from England.
2088. Or from Adelaide? No.
2089. Did you ever make it when bound to Adelaide in a steamer? No.
2090. Then you are of opinion that there is no necessity for a light on King's Island? There is a necessity, but not so immediate a necessity as there is for the Northumberland light. I think the Northumberland light would be far more useful; vessels always avoid King's Island in coming from the westward.
2091. An opinion has been expressed by some nautical gentlemen, that a light on King's Island would be more likely to lead a ship into danger than out of it; do you think that would be likely to be the case? I think not. The first voyage I came here there was no light on the Otway, and no leading light to the heads either.
2092. Have you been through the straits frequently? On homeward passages from Melbourne.
2093. Which way did you usually go? Two passages round the promontory and through Kent's Group, and three times by Banks's Straits.
2094. Have you formed any opinion as to whether a light is wanted in the vicinity of the promontory? I think a light is very much wanted there.
2095. Have you given the subject sufficient consideration to say where it would be best placed—whether on the main-land or on any of the islands? I think one of the islands would be preferable, if it could be erected there.

Captain W. H.  
Lamont.

11 Aug., 1856.

- Captain W. H. Lamont.  
11 Aug., 1850.
2096. So as to be seen from the eastward or the westward? Yes.
2097. Do you mean one of the islands to the south of the promontory? Yes, either the Ten-foot Rock or the Rodondo. I think the Ten-foot Rock is high enough to place a light-house on.
2098. Have you seen the Ten-foot Rock? Yes.
2099. Have you expressed any opinion as to whether a light at the Schanck would be beneficial? I never saw the necessity for it.
2100. That is coming from the westward? Yes; I always kept up close along the land, and have always made Port Phillip lights; I have heard of vessels getting down to the eastward, but they must have been strangers. I had read of them, before I came here, mistaking Western Port for Port Phillip, and therefore I guarded against it on my first trip, and after that I could not mistake it, because there is a bold shore all the way up from the Otway to the Heads.
2101. Would not a light on Cape Schanck be very useful to vessels from Adelaide in the event of strong easterly gales, as they would be afraid then to keep over to the Otway shore? Yes.
2102. But in making a direct course through the straits it would be no guide at all? No.
2103. It could hardly come under the head of a high-road light for a passage through the straits? No; for passages from Melbourne to Van Diemen's Land or Sydney, I should say it is most necessary.
2104. The establishment of a light on Cape Schanck would tend to give great confidence to strangers approaching the entrance to Port Phillip, would it not? I think it would; they could not then mistake Western Port for Port Phillip, which has frequently been done, and if they could not reach Port Phillip Heads there is a good harbour of refuge at Western Port, which the Schanck light would enable them to run for, but I think there are more necessary lights on the coast than that; I do not consider that a light ought to be put there first—I should say Cape Northumberland or the promontory would be the most important points.
2105. Would you consider the Cape Northumberland light a fair-way light? Yes.
2106. A fair-way for where? Anywhere to the westward; for instance, take the mail steamers—if they come round the Leeuwin it would be most necessary for them.
2107. You think they would find an advantage from making the Northumberland light? Yes, I think so, especially if they touched at Adelaide, they would be obliged to make it or go a long way out of their course.
2108. A ship generally coming from the westward would make Cape Otway in preference? Yes.
2109. Have you ever experienced any southerly set off the Otway, sufficient to be remarkable? No. The current, I think, generally runs from the westward, but it depends very much upon which way the wind has been blowing. In a westerly gale we find a very heavy sea there, caused by the current setting round the point; there is sometimes an indraught and sometimes an offset running along between Portland and the Otway. It depends upon the wind; if the wind is off the shore there is a strong offset.
2110. Have you ever been drifted down on to the north-end of King's Island in going towards Adelaide? No.
2111. Have you always commanded steam ships? No.
2112. Have you commanded a sailing vessel in this trade? Yes, for six voyages between Melbourne and London. I have only been nine months in the steam trade on this coast.
2113. Then you have frequently entered Bass's Straits from the westward in a sailing ship? Yes, I have entered them before there was a light on the Otway at all.
2114. If you were bound to New South Wales, in coming through Bass's Straits from the westward, which passage would you take—would you hug Wilson's Promontory or would you go through by Kent's Group? I would go through by Curtis's Island. It would depend very much upon the wind. I would go the most direct course. There is a fine light on Kent's Group: I have gone through there in the night with a sailing ship.
2115. You would not avoid Wilson's Promontory? I would if I could get through any other way at night.
2116. If a light were placed there would you feel confidence in going round by Wilson's Promontory? I think so.
2117. Would not a light on the north end of King's Island be very serviceable to vessels working out to the westward against a westerly gale? Yes, I think it would be; King's Island lies rather to the eastward of Cape Otway, I think, so that we should never approach it, because we steam so close to the wind that even standing off we should make a course to the westward of it very much.
2118. Are you familiar with the coast of New South Wales from Cape Howe to Port Jackson? No.
2119. Have you any suggestion to make to the Commission with reference to the question under consideration by them? No; I would only say, as I have said before, that Cape Northumberland is the most necessary place that I know of on the coast for a light. Some advocate a light on Cape Bridgewater, but I think it would be much better on Cape Nelson.
2120. Supposing a light to be placed on Cape Northumberland do you think it necessary that a light should be placed on either of the other capes, either Cape Nelson or Cape Bridgewater? It would not be so necessary then, but it would be a good mark for vessels bound to Portland. Cape Nelson would be a better mark than Cape Bridgewater, because it lies so much further to the south, and it is sufficiently high for a light. [*The Witness withdrew.*]

Captain Colin Brown examined:—

2121. In what trade are you engaged at present? I have been in the coasting trade latterly with my own vessel, but I have been in the colonial trade to Van Diemen's Land and Port Phillip since 1843.

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Brown.

2122. Where have you been trading lately? Between here and Adelaide and Newcastle.

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2123. Then you are familiar with the navigation of Bass's Straits? Yes; I feel myself tolerably well acquainted with the navigation from Port Stephen to Adelaide.

2124. Will you give the Commission your opinion as to any points where you think additional lights may be required for that navigation, starting from Adelaide? In Adelaide, I believe, the very last voyage I was up there, they had just put a light at Trowbridge Shoal; I believe it was talked about also to have a light on the west end of Kangaroo Island. I am familiar with Backstairs Passage. I had been in Adelaide twice or three times before the light on Cape Willoughby was erected, and when I went down the last voyage I was not very conversant with where the light was fixed; the light is fixed to the westward a little, and it occurred to me when I saw the rocks off the east side of Anti-chamber Bay, that the light would have been better there. Taking the bearing of the light I found that it was not very convenient to get the bearing of it, having a very shy wind, and wanting to keep the shore aboard.

2125. Then you consider that the light might be advantageously shifted? I would not suggest that it should be shifted, but I am giving my opinion that it would have been better either upon the very point where the rocks are, or upon the Pages, than where it is.

2126. It is a great benefit where it is, is it not? Yes, and it is a splendid light.

2127. Proceeding from Cape Willoughby across the Gulf, are there any other lights required? Across the Gulf the lighting is complete now, I think. Then, proceeding to the eastward, I think it is absolutely necessary to have a light at Cape Northumberland; it is the turning point, and it is a low deceiving point. I was close in there, tacking along up there, and I fancy that it is necessary to have a light there.

2128. Do you think a light there would be preferable to a light at Cape Bridgewater? Yes; I think Cape Bridgewater is a secondary consideration, compared with Cape Northumberland.

2129. Do you think that a light on Cape Northumberland would be of service to vessels bound from England? Very great service. In my first voyage that was the land I made. Mount Gambier was the first land I made. I think it is indispensable to have a light there for the sake of the navigation. With regard to any further lights here, if there was to be another light, I think a light upon the Lawrence Islands would be the thing.

2130. Where do they lie? They lie at the turning point into Portland Bay.

2131. That would be a light especially for Portland Bay? Yes, and it would be a fine leading mark for a man coming up along shore to look for, and to see when he was out clear of the point.

2132. Then you think it would not only be advantageous to vessels bound to the eastward, but that it would be also particularly advantageous to vessels wishing to take shelter in Portland Bay, or running for Portland Bay? Yes; I think a light at the Lawrence would be a greater advantage than a light either at Cape Bridgewater or Cape Nelson; if a man has a light at Cape Northumberland he cannot get far out of his reckoning between that and Portland; and I think a light at Cape Nelson or Cape Bridgewater would be unnecessarily close to Cape Northumberland; it would be a fine leading mark for a man going to Port Fairy or Warrnambool.

2133. Have you ever gone close to the Lawrence Islands? Yes, as close as I could sail.

2134. Are they high? Yes; there are two or three broken islands.

2135. What height do you suppose they are by estimation? I should say 200 or 300 feet high, but there might be positions found on which to place a light; it would not require to be seen in every direction; it would not require to be seen to the westward of east-and-by-south, and you do not want it after you are in Portland Bay, because you can see the lights at Portland if it is night time going in. I think with reference to a light at Cape Bridgewater or Cape Nelson, that it is not necessary.

2136. Supposing a light is placed on Cape Northumberland you do not think it necessary to put one at Cape Nelson or Cape Bridgewater? Certainly not.

2137. Then proceeding to the eastward, is Cape Otway light a good light? Yes.

2138. And very well placed? Yes.

2139. Proceeding from there towards Port Phillip, are there any other points which require lighting? Then there might be a light at the north end of King's Island; that has been talked of for the last twelve years, to my knowledge.

2140. You are of opinion that there should be a light there? Yes.

2141. Are you familiar with King's Island? Yes, I have sailed all round it.

2142. Have you ever considered the position in which a light should be placed on King's Island? I think it should be placed on the most convenient extreme north point; the Harbingers run out a long way. I have heard people talk about a light on the New Year Islands, but that is not the thing at all, because that would be of no use to a man coming from the eastward.

2143. You think it beneficial that a lighthouse should be placed on King's Island? Most beneficial.

2144. For all trades? Yes; I have traded to Launceston for some years, and three times out of four I went in to the south of King's Island by the Hunter Islands, but still that is not the best channel.

2145. Do you think vessels bound to Launceston from England would derive great advantage from a light at King's Island? They certainly would.

2146. And also vessels bound to Melbourne? Yes; a ship bound to Melbourne may enter  
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the Nelson Channel with a strong southerly wind, and a man might not like to run down upon the Otway; he would rather borrow upon King's Island; and if he could keep to windward and make King's Island light, he would bear away with confidence; whereas if he steered to the Otway, and was to the northward of his position, he might find he could not weather the Otway, therefore a light on King's Island would be of great service.

2147. Do you think a light on King's Island would be likely to lead a vessel into danger and not out of it? Not the slightest. My opinion is, that if there had been a light on King's Island, and it had been known to the men who brought out the ships that were lost, those ships would not have been lost. If a man had known there was good light there he would have steered with more confidence between the two lights, with a southerly wind he was afraid to make the Otway, and therefore he steered more weathery, and was lost on King's Island.

2148. You think a light there would be advantageous to all navigation? Yes, to every ship passing and re-passing from any part it would be most important.

2149. Would you consider it to be a proper high road light? Yes.

2150. Presuming that you were bound to Port Phillip is there any light that you would consider necessary farther on beyond the Otway? Yes, I think it is necessary to have a light on the Schanck.

2151. Do you conceive that that light would be beneficial to vessels making Port Phillip? Yes, very much so.

2152. Do you think a light on King's Island would be of any benefit to vessels bound to the westward? It would.

2153. Trading to all parts? Yes; for vessels bound from Launceston to Adelaide, for instance, and vessels bound from Adelaide to Launceston also.

2154. Do not coasters generally steer for the Otway? Not if the wind is to the southward, you are then down upon a lee shore. Coming down from Adelaide this last voyage I had a strong gale; at last the wind rather southered and I made the land at Moonlight Head with a very great deal of doubt. It was blowing hard, and I did not like to tack. I was anxious to make the reach if I could get round, and I did weather it. I should have derived no advantage from a light at that time; but if it had been a northerly wind a man bound to Launceston from Adelaide might have kept his reach and made his passage, whereas without a light he might have lost his passage.

2155. You think it is necessary to have a light on the Schanck? Yes, I think it is necessary. Last voyage I did not make a mistake, but a great many did.

2156. Where were you coming from? From the eastward to Melbourne. There were a good many vessels got down upon the western shore, about half way between the heads and Cape Otway and took two days to beat up. I kept the weather shore on board, and one tack brought me in; but seven or eight vessels got down and I beat them in. They were all to a man complaining of the want of a light on Cape Schanck.

2157. Was the wind blowing from the eastward? North-east.

2158. If you were bound from the westward, through the straits, to any part of New Zealand or New South Wales, would the Schanck light be of any service to you? That would be a doubtful matter. I might see it or I might not. It would be convenient if the wind was easterly, and a man was tacking and standing in, and he saw the Schanck light, he would know where his ship was. It would not be of so much importance to vessels navigating the straits generally as to vessels arriving at Melbourne.

2159. But still a man navigating the straits with easterly winds would be able to pick up his position by a light on the Schanck? No doubt.

2160. If you were bound from Melbourne to New South Wales what channel would you take in crossing the promontory? That would depend upon the wind. I have taken all the channels. There is a great difficulty in speaking as to how the navigation ought to be rendered complete off the promontory.

2161. How do you think it would best be done? When the wind is shy from the northward the master of a coasting vessel is anxious to keep his weather shore on board, consequently he wants to pass close to the promontory; and when the wind is shy from the southward, being the turning point, he is also anxious as quickly as possible to make a fair wind of it, and therefore he wants to cut the corners as close as possible. A man who had confidence in his navigation would not wait to go through a wide channel, he would pop through the narrow channel if he could, either night or day, with any degree of safety. The great thing depends upon whether it is contemplated to put two lights, to make the navigation complete, or only one.

2162. Start with the presumption that it is only intended to put one light? It is not every one of those rocks that a light could be placed on; there might not be wood and water, or a landing place, and that is all to be considered. If a light could be placed on one of the Cliff Islands that, in my own opinion, is the best position for the navigation of a vessel coming from the westward; a light on the western Cliff Island, not the Cave Rock. I do not know that that would be too high, and I believe there is sufficient shelter between the two islands to put a ship in with provisions.

2163. You think that to obtain the advantage of a light in coming from the westward Cliff Island is the best place? Yes, to render the navigation complete as far as one light would do it for ships coming from the westward.

2164. How would that answer for ships coming from the eastward, round Cape Howe? It would not be of so much service to them certainly; it would be of service coming from the eastward, but not by any means so much as coming from the westward.

2165. Have you considered at all whether a light might not be judiciously placed on the extreme southern point of the promontory, that would afford advantages beyond the advantages pointed out by placing it on Cleft Island? I think if you put a light upon the

extreme



extreme point of the promontory it would be obscured by Cleft Island for a good many points of the compass.

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2166. That is from the westward? Yes; I have not remarked how many, but it has struck me that it would be obscured and that you would approach the Cleft and Glennie Islands before you would observe the light at all. 13 Aug., 1856.

2167. It would be more obscured in coming on a south-west course for Port Phillip than it would be for vessels steering a nearly due west course bound through the straits? Yes.

2168. They would probably open the light on the promontory in sufficient time to clear the Cleft Island? Yes, but I think it would be considerably intercepted.

2169. If the light were on the promontory there would be nothing to obscure it in coming from the eastward? I think not; I think it might be placed on the promontory with every advantage to a ship coming from the eastward.

2170. Is not the land on the east side of the promontory just south of Waterloo Bay very high? Yes.

2171. Would it not obscure the light to vessels coming down from the neighbourhood of the Seal Islands? It would.

2172. Has a vessel any business near the Seal Islands? Coasters always keep up close to those islands with the object of getting into Waterloo Bay or Refuge Cove for shelter.

2173. Then a light on the promontory would be obscured both ways, unless a vessel was either east or west of it? I think it would be obscured considerably to a westward vessel, but not so much to a vessel to the eastward.

2174. But a vessel must bring the promontory to bear nearly west before she could see it? Yes. With regard to the navigation here I would suggest that the light on Kent's Group is of no use at all. I think whoever put it there threw away so much good Government money. It stands up I believe nearly 1000 feet high. I have been within ten miles of the island and could not see the light, and some nights I have seen it forty miles off, clear like a star, in fact, any stranger not knowing the nature of the light, would have said it was a star.

2175. Do you think that it is not useful for the general purposes of the navigation in consequence of its continual chance of being obscured? Yes, and I think it often happens that the atmosphere below is tolerably clear when you can see the land of Kent's Group but you cannot see the light.

2176. Have you found that to be the case? Yes; I have been within ten or twelve miles of the island when I could see the land, and could not see the light because it has been capped with fog. I know that it is outrageous to talk of doing away with the light, but the first evil is the least evil, and I would do away with that light and take all the materials belonging to it and put it on Hogan's Island; there is wood and water there, and all the appliances for maintaining a light with ease and comfort; and there it would afford a much more ample direction for the wide passage than the light on Kent's Group does.

2177. Do you think a light upon Hogan's Island would be equally serviceable for vessels bound through Banks's Straits to Melbourne as the light on Kent's Group? Yes, I believe that they could see that light as a general thing after leaving Goose Island, especially knowing they would have a light either on the promontory or Cleft Island.

2178. Then you think that the Kent's Group light is one of those lights, which from its continued obscurity no mariner would consider himself safe in standing for, for fear of not being able to make it? Yes.

2179. In your opinion then it is next to useless? Yes, it is too high. If there was a light upon Hogan's Island it would be in a more central position, and you could steer directly for that light whether bound for Adelaide or Port Phillip, or Launceston, you could steer right plump for the Hogan's light and make it in the night, and after passing it you would have a fine channel fifteen miles wide to steer through, and you could depend upon seeing the light.

2180. If a light was placed on Hogan's Island would not that also be an additional reason for placing the other light for the promontory upon Cleft Island? Yes, because I consider if there were a light upon Hogan's Island, taken from Kent's Group, there would be a necessity for only one light at the promontory, because then a guide would be given to the westward; coming from the north-eastward they would have Cleft Island and from the westward the light on Hogan's Island would be sufficient.

2181. If economy were to be studied as well as utility, you would suggest that the light on Kent's Group should be shifted to Hogan's Island, and a light be erected on Cleft Island? Yes.

2182. That you think would make the navigation perfect? Yes, I think it would make it as complete as would be required.

2183. Is not Kent's Group light of great service to ships proceeding to the coast of Tasmania from New South Wales by giving them a guide for Cape Barren? No, I have gone down to Hobart Town three or four times, and never came near it. For that purpose a light should be placed on the Babel Islands. A friend of mine once lost his vessel from that cause; he made the land on the eastern part of Great Flinders' Island, and he steered down and mistook the Babel Islands for Cape Barren. He was bound to Hobart Town, and he steered his ship ashore off Vansittart Island and lost her.

2184. If he was not quite certain about the land, do you think he was a prudent mariner in taking that course? I do not think he was very prudent; but it is not one time out of ten that any mariner going from Sydney to Hobart Town will see Kent's Group, it is so far to the westward.

2185. Have you rounded the promontory frequently? Four or five times.

2186. Have you ever seen the Ten-foot Rock? Yes, as close alongside as I dared go.

2187. What is your opinion of that as a position for a light? If a light could be placed there, I think it would be the best position of all; but to put a light there would involve an enormous expense; everything would have to be taken to it.

- Captain O. Brown.
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2188. But if it could be done you think it is the best spot for a light near the promontory? Yes, because you could see it in any point of view, either from the eastward or the westward.
2189. Are you familiar with the Rodondo? Yes; you could not build a lighthouse there. I do not believe a seal could land there, let alone a man.
2190. It has been given in evidence that some men have lived there? I should not think any body could land there. If you could put a light on the top of the Rodondo, it would be too high to be seen well, the same as Kent's Group light; the Rodondo would be a good position, but the Ten-foot Rock would be a better.
2191. What is the size of the Ten-foot Rock? It appears about the same size as a good sized ship—the flat on the top deck of a ship.
2192. What height is it? It is marked ten feet on the chart, but I think it is twenty; a lighthouse could be made to stand very well upon it.
2193. Would the difficulties of erecting a lighthouse on the Ten-foot Rock be anything to be compared to the difficulties of erecting the lighthouse on the Eddystone? No; a lighthouse could be built there of course—no doubt about it; and if expense was no consideration I should say the Ten-foot Rock, but I thought the object would be to place a light in the most judicious position at the least possible expense.
2194. Supposing there were to be two lights at the promontory, which would you suggest as the most desirable positions for them? I would have a light placed on one of the Cleft Rocks for the western approach, and the light taken from Kent's Group and put upon Hogan's Island.
2195. That is, if it is found impossible to put a light on the Ten-foot Rock? Yes; but I think the Ten-foot Rock would be the best position, because there is nothing to fall in with in the channel but the Ten-foot Rock.
2196. In coming down from Cape Howe towards the promontory, is there any spot on the eastern side of the promontory where a light would be of service? A light would be of great service on the southern Seal Island, for the very reason I have before named, that coasters coming up from the Howe with a shy wind off the land generally try to keep that land on board in order to get under the promontory for shelter.
2197. Would a light there also be very serviceable as a leading light for Port Albert and Corner Inlet? Yes, it would be an excellent leading light for Port Albert.
2198. Going on towards Sydney, is there anything between the promontory and the Howe that requires particular notice? I think it is a shame, at this time of day, to have a piece of coast 150 miles unsurveyed, as is the case along that coast. I understand the light on Gabo Island is only a temporary light; I think, if it was ever contemplated to build a substantial stone lighthouse it ought to be carried as far out on the south-east point of the island as practicable, in order to get a bearing at the earliest moment. In coming round the Howe I have not been ashore to examine the island; but the further out the light is the better.
2199. Proceeding on from Gabo Island, is there anything else you would call attention to? There is nothing that can be improved at all until you get to Jervis's Bay: but there wants a light either on Point Perpendicular, Cape St. George, or Crocodile Head. My opinion is that it ought to be on Point Perpendicular, for two reasons. Cape St. George would be better for vessels approaching from the southward; and if it was possible to erect it at Crocodile Head, it would be better for vessels from the northward: but then, when I place it on Point Perpendicular, I have quite as good an approach as to Saint George's Head coming from the southward, and I have quite as good an approach coming from the northward: but there is the advantage of going into Jervis's Bay in a dark night.
2200. As a leading light, do you think that a light at Jervis's Bay is absolutely necessary? Yes.
2201. Have you ever observed any particular indraught there which caused you to make the land on the starboard bow when you expected to make it on the port bow? Yes.
2202. Had that been the case during the night time, might you have lost your vessel, thinking you were steering a straight course for Sydney? Yes, when if I had seen a light it would have saved me: and there is a very beautiful harbour of refuge there which, I think, ought to be lighted.
2203. Have you ever been in there? Yes; and anchored under Bowen's Island.
2204. Is there anything else between Cape Howe and Port Stephen that you think necessary, bearing in mind that there is a new lighthouse being erected on Nobby's Island at Newcastle? I see there is a light tower on the south end of Twofold Bay, and I think it would be very judicious to light that as a harbour light. There is no part of the coast where coasting vessels are more in than at Twofold Bay—coasters are always in there.
2205. Do you know whether the pillar there is in a proper position for running for the bay? I have never considered that, but a light is necessary there for a man might lose canvas and be blown off to New Zealand, whereas if there were a light he might make it and be in safety, and a light there would be a directing light for the coast as a man would know by the light how he approached towards the Howe, and how he approached from there to Point Perpendicular; it would be of the same use as a light on Point Perpendicular.
2206. Is there any other suggestion you have to make to the Commission? No; I think not. The navigation as between Jervis's Bay and Sydney is pretty good. It has occurred to me that the light at Sydney is placed on the wrong head of the bay; it ought to be on the north head instead of the south head. I have seen that light, and then afterwards it has been obscured by the land; if it had been on the north head it would have thrown the light so-much farther out and would have made a more pointed approach to the entrance; it is not now at the entrance to the harbour; however, it has been standing there for ages and I suppose will have to remain so. If they ever contemplate removing it the best thing would be to put a red light on the north head and not to do away with the present light, which is a beautiful light.
2207. Have you any further observations to offer to the Commission? No, I think there is nothing else that I can suggest at all.
- 2208.

2208. Are you familiar with the south coast of Van Diemen's Land? No.  
 2209. Do you think there is any necessity for a light there? A light on the south-west cape would be a very convenient thing, not only for ships approaching from England, but there are a great many whalers in that neighbourhood, and I think a light on the south-west cape might be judiciously placed if the trade was thought of that importance to require a light.  
 2210. Do you know the Bruny Island light? That I think is not necessary.  
 2211. Not as an approach to Storm Bay? The light ought to be placed on Tasman's Head, I think.  
 2212. Is it not placed on Bruny Island with a view of showing large ships where Dentrecasteaux Channel is? If there were a light on the South Cape and a light on Tasman's Head that would render the navigation of that part of the land complete.  
 2213. In going from the Derwent, up the eastern coast of Tasmania, is there any point where a light is required? Not unless a light could be placed on the turning point of Tasman's Island, but I think it would be too high, like Kent's Group. If a light could be placed there it certainly would be a fine turning point, but I do not think it could be put there. I am not aware of any spot on the eastern coast that requires a light; it is a straight coast; if there was a light at all it should be upon some of the projecting points in the neighbourhood of the Schouten Islands; that would be a good point if it was thought the navigation warranted such a thing.  
 2214. Before entering into Banks's Straits the Eddystone is a very important point, is it not? Yes; and it is a low point.  
 2215. Has it ever occurred to you that the facilities of the coasting trade would be very much improved by having a light there? Either on the Eddystone or St. Helen's Point.  
 2216. There is a great deal of trade passes the Eddystone, is there not? Yes.  
 2217. And a light there would be of service to ships taking their departure for the coast of New South Wales, would it not? Yes.  
 2218. On the whole of the eastern coast of Tasmania is the Eddystone the point of all others which you would select for a lighthouse? Yes, if it were intended to put another light; the Schouten Islands would be merely an approach to that part in case of ships being taken of a dark night; but there are very few vessels navigating that coast, comparatively speaking. [*The Witness withdrew.*]
- Adjourned till to-morrow, at Ten o'clock.

Captain C.  
Brown.  
11 Aug., 1856.

TUESDAY, 12 AUGUST, 1856.

Present:—

CAPTAIN KAY, R N., | MR. BROWNE,  
MR. DOUGLAS.

Captain Godfrey Vaughan Bentley examined:—

2219. You command the steamer "City of Hobart"? Yes.  
 2220. And you have commanded other vessels? I have commanded vessels since the end of 1836.  
 2221. Trading in these Colonies? Yes, from 1836 to 1843 I was trading between Sydney and this and between Launceston and this alternately, excepting one year when I was in England, and then for ten years, up to 1853, I was trading between Hobart Town and Port Albert and from that to Sydney.  
 2222. Are you familiar with the western entrance to Bass's Straits? Not so much so as the eastern one, but I have been several times close round Cape Wickham and at anchor inside the New Year Islands.  
 2223. What is your opinion with respect to the erection of a lighthouse on King's Island? I have heard before of that, and the purpose then stated was in consequence of the number of wrecks occurring on the west side of the island—whether you want a light for a leading light to the straits or a light to preserve vessels that get too far south from shipwreck, that is two different things.  
 2224. Do you think it would be highly beneficial that a light should be placed on the north end of King's Island? I do not think it is necessary there at all.  
 2225. Is there any part of the island on which you think it necessary to place a light? If it is to prevent shipwrecks I should place it either on the New Year Islands or about the centre of the west coast of King's Island.  
 2226. If there had been a light on the North Cape visible over the New Year Islands, would not it have been a benefit to the vessels that have been wrecked there? It might or might not, for in heavy weather you depend upon the strength of the light; a light on the New Year Islands would show as far as one on King's Island, as far as strength goes, and therefore farther south in bad weather; and there is another objection to King's Island, that when the rain holds up a low cloud covers King's Island at the height of 300 or 400 feet, it is perfectly clear at the bottom but you cannot see the top.  
 2227. Is it obscured by mist more than any other part of the straits? Not the same as the other rocks in the straits are. A cloud would form on Curtis's Island, and on Kent's Group, and the Rodondo, when there is no cloud anywhere else, that is not the case at King's Island; but in heavy weather, particularly after rain, the whole of King's Island top is obscured when it is perfectly clear below.  
 2228. Are you of opinion that a light on the north cape of King's Island might tend to lead a ship into danger instead of warning her of her danger? That would not be a bad place for a light if you wanted one to light the entrance of the straits, but it would not be the thing  
 for

Captain G. V.  
Bentley.  
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Captain G. V. Bentley. for vessels that found themselves too far to the southward of their course; a light there would not pick them up effectually. The objection to a light at the north end of King's Island is that the light would not be visible over the point just south of the New Year

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2229. It has been given in evidence that a light could be well seen over that point and over the New Year Islands also? I doubt it very much, the distance between the two points is nine miles, and it does not require a very high point to shut in a light at a distance of nine miles. I think if a light is required for the purpose of saving vessels from shipwreck, the New Year Islands would be the proper place. It is always prudent to put a light outside a danger and not inside, and the position of a light on the New Year Islands would give the outside danger and show the point a ship would have to clear that had made the coast of King's Island to the southward of the New Year Islands.
2230. A light on the New Year Islands would not be at all available to ships coming from the eastward, would it? No, but they would not require it, the principal object in my opinion is for vessels running in from the westward towards the straits that have not had an observation for some days; vessels working through the straits are always sure of their position, and in working to the westward, after opening the New Year Islands from Cape Wickham, the light on the New Year Islands would be most useful, as it would mark the extreme western point of land, and also lead coasting vessels into the good roadstead under those islands, where a crippled ship or moderate sized vessels would find good shelter from all westerly winds.
2231. In the event of any light being placed on King's Island, you are of opinion that it should only be as a warning light and not as a leading light? Yes.
2232. Do you not think a light on the north end of King's Island would be useful to vessels bound to the westward? It might be useful, but I do not think it would answer the purpose for which a light is required.
2233. You say you should never light inside a danger, would not you be doing that in respect to the Harbingers by lighting the New Year Islands? A light on the New Year Islands would keep you clear of the Harbingers by its bearing, much better than a light on King's Island, which would be useless to vessels coming from the southward in enabling them to clear the Harbingers.
2234. What is your opinion as to the desirability of a light on King's Island at all? It would be useful to save vessels from shipwreck if they were out of their course to the southward.
2235. Do you think a light on King's Island would have the effect of saving vessels from shipwreck? I think it would if it were half way down the island, or on the New Year Islands, but I do not think it would have that effect if it were placed on the north end of King's Island.
2236. Supposing you were bound from Adelaide to Launceston, and the weather was thick, the wind hanging well to the northward, if you could just fetch round to the north end of King's Island, would not a light upon the north end of that island be of considerable service to you when you were not quite satisfied of your position? Yes, no doubt if the weather were clear enough to see it; but if we go to that we may have a light on every point of the straits. I should not consider a light on King's Island as a light for coasting vessels; I should merely consider it as a light to pick up foreign ships coming from the westward that have not had observations for several days. I do not think that it is requisite on the north end of the island, though no doubt it would be useful.
2237. You do not think that it is actually necessary to have a light there at all, excepting for the assistance of vessels that may get out of their course in coming from the westward? No, I do not think it is advisable to encourage ships to come down there.
2238. Do you think a light there would have that tendency? Of course men would borrow more on that coast with a light being there. The New Year Islands are the most western land, and a man is naturally more anxious to know the position of those islands than any thing else, because the safety of his vessel would depend on her weathering them.
2239. You say that King's Island is liable to be clouded more often than any other points on the coast? It is clouded the same as all high land is.
2240. But not more so? No; it does not cloud the same as the islands at the eastern end of the straits. A light on the New Year Islands would very often be visible when a light on King's Island would not be visible. A low light is generally more visible in thick weather than a high light, and on the New Year Islands would always be visible except in a fog.
2241. It has been stated in evidence here that a ship standing in, twenty-five miles to the southward of Point Wickham, would see a light on that point over the low lands and over the islands also; are you of that opinion? No, I do not think so. If you know the height of the points by measurement I cannot say it would not be so. A vessel might see it at twenty-five miles out; but the question is, would she see it at five or six miles out under the point inside the New Year Islands.
2242. If you could see it twenty-five miles, you could see it in approaching before you got close in under the land? No, you might not, particularly in squally weather. I have often been within six or seven miles of Swan Island light in such weather before seeing it.
2243. A man might get so close in under the light as to shut it in? At the extreme point of twenty-five miles you might see the light over the hill, but if you got anything inside that you might not see it over the land of King's Island.
2244. Would not the soundings tell a man where he was? You could not have much soundings in heavy weather, on a lee shore in such deep water as is close to the island.
2245. Supposing a light is to be erected on King's Island, for all the purposes of navigation, the coasting trade and every other trade, which should you consider the most eligible position, taking all the circumstances in every point of view into consideration—the case of vessels proceeding to the westward, vessels coming in from the westward, vessels being carried down

on the west coast, or vessels coming up through the passage by the Hunter's Islands? There is no doubt the position on Point Wickham is the best position as a leading light for going through the straits, but I do not think it would answer the purpose of picking up vessels getting too much to the southward.

Captain G. V.  
Bentley.

12 Aug., 1856.

2246. As a leading light, and as an ordinary light to warn vessels of danger, you think Point Wickham would be the best? It would be the best for vessels coming from the eastward; but I do not think vessels coming from the eastward require a light there at all, because there would be no vessel coming in that direction but what would know her position well enough to be able to borrow upon King's Island without danger; but for vessels getting in on the land to the southward of the New Year Islands, I think a light on the New Year Islands would be the best. I think the New Year Islands would be more advantageous to vessels coming from the southward, because they would see it as far to the southward as they would the light at Point Wickham, and in hazy weather I believe you would see the New Year Islands light when you could not see the light upon Point Wickham, because you would depend more upon the strength of the light than the height of it in showing through the haze; but for the purpose of picking up vessels that have got in on King's Island and have been lost, I believe about the centre of the island would be the best position, as it would be seen either from the southernmost point of King's Island or from the Harbingers.

2247. Would not it be so high that it would be always capped? No, you might choose your position for it.

2248. Then it could not be seen all round? No, but north or south the entire length of King's Island.

2249. Strangers should be warned under all circumstances not to approach King's Island, should they not? There would be no danger in approaching King's Island if there were a light on the New Year Islands, because you could always see that light except in thick weather, and in such weather when you could not see the light no man would run his ship near unless he were compelled to do it.\*

2250. Supposing you were in the trade between Van Diemen's Land and Melbourne, besides the lights at Swan and Goose Islands in the straits, which you may use in coming from Hobart Town, and the Kent's Group light which you may use in coming from Launceston, are there any other lights that you think should be erected? Yes, Cape Schanck, I think a light there is more important than any light in the straits.

2251. Do you believe that the Schanck light would be a beneficial light not only for vessels bound to Port Phillip direct, but for vessels bound through the straits? No, I do not; except they were working through.

2252. You think, in many cases, a light at Cape Schanck would be most important? Yes; I believe two-thirds of the tonnage coming to the port of Melbourne comes from the eastward; and all those vessels want to make the Schanck; and to vessels coming from the westward that run down to the heads at night, the Schanck light would give them their cross bearing with the lights on the heads, so that they could always tell their position and lay to off the heads at a proper distance.

2253. A cross bearing on the Schanck would give them their position? Yes; a master of a vessel would be perfectly comfortable, as he could keep his ship in position. The great danger to vessels coming from the westward towards the heads at night is, that the master is afraid to lie to in case he might get into the indraught into the heads.

2254. Would it not be an advantage in preventing vessels mistaking Western Port for Port Phillip? Yes.

2255. That has been the case sometimes, has it not? Yes.

2256. Is there not a great indraught into Western Port? Yes.

2257. Are the lights on Shortland's Bluff good lights? Yes.

2258. You have no fault to find with them? No.

2259. And the Schanck light, you think, should be a powerful light? Yes.

2260. Are the Shortland's Bluff lights of sufficient radius of vision? I should think you could see them eighteen or nineteen miles. I have never run a course to dip those lights. I have always turned away to the eastward. I conceive a light on Cape Schanck would be a most valuable light for all vessels; because, with vessels coming from the eastward, if they miss the Schanck, they miss the light in the heads; and in easterly weather it would be very desirable to pick up the light on the Schanck.

2261. Would a light on the Schanck be of any service to vessels passing through the straits? Not unless they had beating weather.

2262. In proceeding to New South Wales would you recommend any additional lights? I would recommend a light on the south-east point of the promontory—I do not see any means of placing it elsewhere. The lights I should propose to place would be a good strong light on the south-east of the promontory, and a harbour light on Cloumel Island, at the entrance to Port Albert.

\* In all the remarks which I have made with reference to the proposed light on King's Island, I have considered that the principal object in view was the preservation of such vessels as had the misfortune to make the land to the south of the New Year Islands in bad weather, and I am of opinion that a light on the New Year Islands would be almost their only chance of safety. It would be seen off a ship's deck about eighteen miles, as it would be about 200 feet high above the water, and from the position of the islands I feel confident that a light on them would be visible in bad weather very much farther to the southward than one on Cape Wickham; it could not possibly be shut in by any land, and it is in bad weather it is most required. I believe there would be but little chance of seeing a light on Cape Wickham in such weather at any great distance; another objection to that light would be, that it would be of no use to enable a vessel coming from the southward to clear the New Year Islands if she were in shore in a dangerous position. I have a great objection to any light being placed on a mainland at an elevation of five or six hundred feet, as when most required it is generally fogged in and not to be seen, and when visible it is most difficult to judge one's distance from it. I believe 300 feet is as high as any light should be placed on a mainland.—G. V. Bentley.

- Captain G. V. Bentley.  
12 Aug., 1856.
2263. Have you rounded the promontory very often? Yes.
2264. Do you think in placing a light on the promontory itself it would be visible to vessels coming from the westward? It would be sufficiently visible to a sailing vessel, because no sailing vessel goes close in shore.
2265. Do you think that a sailing vessel coming from Melbourne would usually keep such an offing as to sight the light clear of the Glennie Islands? Yes, if the weather was clear she would see the light at a distance of eighteen or twenty miles, and then she could run for it, the promontory is so clear, and bold, and steep that she might run right under the light without any danger.
2266. Is the south-east point of the promontory very high land, or does it run out in a sort of tail? There is a sort of hummock runs out there. There is one thing to be considered—the landing the stores; and there is a little cove in Waterloo Bay, on the eastern side of the promontory, that the smallest vessel might lie in with perfect safety, and a road could be made along the edge of the hill.
2267. Have you ever landed on the promontory? Yes, many times, I have been in Waterloo Bay, but I never walked down that way, where it is proposed to place the light.
2268. Is there plenty of stone there? Yes.
2269. There would be no difficulty in finding the stone for a lighthouse? No, and there is plenty of water.
2270. Have you ever considered the possibility of putting up a light on the Ten-foot Rock? I do not think it would be possible to put one there or to land stores at any time.
2271. Have you passed it in bad weather? Yes, at all times; I never saw the sea running over it; I have seen the head of the sea going over it.
2272. Do you think, in heavy weather, the sea would be so heavy as to destroy the commencement of a lighthouse during its erection? The spray would go over it, and the salt water would destroy the mortar.
2273. If it should not be possible to erect a lighthouse on the Ten-foot Rock, you would say the point of the promontory? Yes, anywhere on the south end of the promontory would do.
2274. In preference to Cleft Island? You could erect nothing on Cleft Island without an immense expense.
2275. The Rodondo is also impracticable? It might be landed on perhaps, but there is not a spot there for a boat to go into.
2276. It has been given in evidence that some people used formerly to live on the Rodondo, and the witness said you would be able to give the Commission some information upon that subject? I never heard of any one living there; there was a sealer living on Curtis's Island; I never heard of any one living on the Rodondo; I have no doubt the sealers' boats used to touch there and look round it, but I do not think there is any place where a boat could lie off.
2277. Have you had great experience of Wilson's Promontory? I made 160 voyages in the Port Albert trade.
2278. From Van Diemen's Land? Yes; and Sydney.
2279. Have you well considered the question of a light on the promontory? Yes; I wrote to the harbour master some two or three years ago about it.
2280. In coming from the eastward do you consider that a light on the promontory would be well open to all vessels approaching from the Howe? Yes; and if a harbour light, that could be seen ten or twelve miles off, were put on Port Albert entrance, then any vessels might beat down along the beach, I have done so in knoth water, when I could do nothing in the offing; and there is no danger in the coast after you pass the Lake entrance coming from the eastward; but to the eastward a few miles there are one or two rocks, and the Snowy River comes down somewhere about there. Any vessels coming in a direct line from the Howe, if they get the least out of their course to the northward get into danger on the Port Albert banks; a light at Port Albert would pick them up, and if they got too far to the southward Kent's Group light would pick them up.
2281. Have you ever considered whether it would be advisable to remove the light from Kent's Group to Hogan's Group? I think it is better where it is, because all large ships steer to the south of Curtis's Island until they make Kent's Group.
2282. If there were a light on the promontory do you think large vessels would avail themselves of it? No; I think it would be more for the coasting trade.
2283. The large mail steamers which may be expected from Europe shortly would all shave the promontory, would they not? Any steamer would use the passage round the promontory.
2284. You think over-sea ships bound to Sydney or New Zealand would not go by the promontory although it was lighted? No; not large ships.
2285. Your experience induces you to urge upon this Commission the necessity of placing a light on Wilson's Promontory, and one on Port Albert bar? Yes, the coast by Port Albert is very dangerous, and there have been several instances of vessels getting in there and some being lost.
2286. You see no objection to the light on Wilson's Promontory being shut in by the Glennie Islands? No; because no vessels would keep down upon that coast except steamers, and they would always know where they were, and in bad weather they would keep nearly the same offing as sailing ships.
2287. After passing the promontory do you know the Gabo Island lighthouse? Yes.
2288. Is that in a satisfactory position? I think so.
2289. And does it give a good and sufficient light? Yes.
2290. Between that and Sydney Heads is there any point that strikes you as also requiring to be lighted? I think Cape George should be lighted.
2291. Have you ever observed, in passing to the northward, that your vessel experienced any considerable indraft in the neighbourhood of Cape George, so that you frequently made the land on your starboard bow when you expected to make it on your port bow? Yes; there is no doubt that some vessels have been lost through that.

2292. Where would you recommend the placing of that light? I should place it on Cape George, because you cannot see Point Perpendicular if in shore south-west of Cape George; a light placed there would have the same fault as the Sydney light, has now—that a vessel getting in shore to the southward of Botany could not see it. Captain G. V. Bentley.  
12 Aug. 1856.
2293. You would recommend that a light should be placed on Cape George? Yes; it should not be placed too high, because if the wind is any way from the eastward it clouds in very heavily there.
2294. With that light do you think that the eastern coast of Australia would be well lighted? I think a harbour light at Twofold Bay would be beneficial, as it is very difficult to find the entrance to that bay in a dark night.
2295. Of all those lights which you have been examined about, supposing it were only intended to erect one, which should you suggest should be erected first? Cape Schanck.
2296. You think that would be the most useful light of the whole? Yes; I think that is most required.
2297. Next to that which light would you say? I should say a light on the west coast of King's Island would be the next best, because we have had no losses through the want of a light on the promontory.
2298. You would consider that if all the lights you have recommended were put up, the navigation of the straits would be much simplified, and great advantages would be obtained by those who navigate them? No doubt of it. There would be no danger then in running boldly down to the promontory.
2299. Have you ever considered the question of putting a light on each side of the promontory? No; I do not think it at all necessary. Some people would want a light on every rock in the straits to make a comfortable passage through.
2300. Do you frequently make the passage through Banks's Straits? Yes.
2301. Do you think those straits to be well lighted? Very well.
2302. On the eastern coast of Tasmania is there any point on which you consider it desirable that a light should be placed? I think a light should be placed at the Eddystone Point, that is the only dangerous part of the coast.
2303. That is a great turning point, is it not? Yes.
2304. And should be lighted? Yes.
2305. Then in proceeding to the southward from the Eddystone, is there any other point on the coast of Tasmania that you think deserves attention? None except the Hippolyte Rock.
2306. Where is that? Off the pillar. Some have suggested a light on the pillar, but I do not think that is practicable.
2307. Do you think the Hippolyte Rock is practicable for the erection of a lighthouse? Yes, I think so.
2308. Do you think the trade there is sufficient to warrant the expense of a light at that place? I hardly think it is; but a light on the Eddystone is very much wanted. I am continually falling in with vessels in those straits coming in from South America and New Zealand bound to this port, and also from Sydney.
2309. Have you any further suggestions to offer to the Commission? No, only I think all the rocks in the straits ought to be properly laid down in the charts. They are now all marked "p.d." (at least those rocks surveyed by the "Beagle"), and I think their position ought to be accurately ascertained and laid down. There are several rocks that I can point out that are not laid down at all; and if you look over the chart you will see that almost every danger is marked.
2310. Then you think Bass's Straits require re-surveying? I do not know whether it requires re-surveying, but I think the position of those rocks should be pointed out, and another error in the chart is that in the anchorages in the straits, although giving the soundings, they have not given the character of the bottom; the bottom is given on the outside, where it is of no use, but in the anchorages it is not given at all.
2311. Have you ever been to the westward of Cape Otway? Yes; but a good many years ago. There are men more conversant with that trade, that could give better opinions than I could.

Captain Alexander White examined.

Captain A. White.  
12 Aug. 1856.

2312. What ship do you command? The steamer "Champion."
2313. In what trade? Warranbool, Port Fairy, and Portland.
2314. Have you been in any other trade? Not in the coasting trade.
2315. Then you are acquainted mostly with the coast from Melbourne to Portland? Yes.
2316. Have you been to the eastward at all? Not coasting. I have made several voyages out from home to Sydney.
2317. Have you been to Adelaide? I have.
2318. Have you considered the question of a lighthouse on Cape Northumberland? I have heard a great deal of talk of it, and I think it would be a great improvement.
2319. Do you think a light upon Cape Northumberland would be preferable to a light on Cape Bridgewater or Cape Nelson? Yes.
2320. Do you consider that the great turning point on that part of the coast? Yes.
2321. Have you ever been close to Cape Northumberland? Yes, within ten miles.
2322. Do you think a light on Cape Northumberland would be also beneficial to over-sea ships from the westward? Yes.
2323. Even ships bound to Melbourne? Yes.
2324. Under what circumstances would ships bound to the eastward of the entrance of Bass's Straits derive advantage from a light on Cape Northumberland? Strong southerly westerly winds might blow them down on the coast.

- Captain A. White.  
12 Aug. 1856.
2325. In approaching Bass's Straits from the westward, with the intention of proceeding to Port Phillip, is it desirable that a ship should make any land in preference to the Otway? No, I should not attempt it.
2326. You think, except from necessity, no ship would attempt to make the land except at Cape Otway? No.
2327. You consider Cape Otway a leading light? Yes, and a capital light it is.
2328. During the summer season, in a continuation of easterly and south-easterly gales, might not a light at Cape Northumberland be very useful? Yes, a vessel might work up along the land then.
2329. With reference to the coasting trade, is there any light which you think would be desirable in any harbours that you frequent? Merely a harbour light at Warnambool or on the jetty at Port Fairy.
2330. Is there any harbour light at Portland? No.
2331. Is one required? No, I think not.
2332. Would not a light on the cliff to the northward of the jetty at Portland be very useful? I do not think it necessary.
2333. It has been suggested that a light might be put on the Lawrence Rock? I think a light would be more useful there if one was placed anywhere.
2334. You have constantly seen the Cape Otway light of course? Yes.
2335. Have you ever considered the question of a light on King's Island? I do not see that it is necessary for my trade, but for the general trade I think it desirable.
2336. On which part of the island would you recommend its being placed? On the north-west corner. I should say on Point Wickham.
2337. Could you give the Commission any reasons why you have come to that conclusion? No, excepting that it would be useful for vessels making the land in thick weather.
2338. Have you well considered the subject? I have not considered it very particularly. It never affected me.
2339. Then you are not prepared to enter into any nice discussion as to whether it should be on the north-west or on any other point of the island? No.
2340. Do you think a light on King's Island would be useful to coasters? No.
2341. As a fairway light in the western entrance of Bass's Straits you think it might be of service? Yes.
2342. Are you aware that a great many wrecks have taken place on King's Island? Yes.
2343. Do you know the circumstances under which any of them occurred? No.
2344. Are you of opinion that if a light had been put at the place you have pointed out any of those wrecks might have been prevented? Yes; I think the American ship "Whistler" might have been saved.
2345. Except in general terms you are not prepared to give any particular evidence as to where a light should be on King's Island? No.
2346. Your opinion inclines to Point Wickham? Yes.
2347. Are you familiar with the coast to the eastward of Port Phillip? No.
2348. Is there any necessity existing in your opinion for any additional light near Port Phillip? No, I cannot say that I see it.
2349. Do you consider the lights on Shortland's Bluff to be quite sufficient? I think a light on Cape Schanck would be a great advantage to vessels lying off during the night.
2350. Have you any difficulty in seeing the Shortland's Bluff lights at night? None whatever.
2351. Is there any part of the bay, in approaching Port Phillip, where you cannot see the Shortland's Bluff lights? When you are to the westward of them they are not opened.
2352. And you think a light on Cape Schanck would give confidence to vessels approaching Port Phillip? Yes; and it would even be useful to vessels coming up from the westward.
2353. Are the leading lights on Shortland's Bluff well placed in your opinion? I think so.
2354. Have you ever known a vessel mistake the entrance to Western Port for the entrance to Port Phillip? No.
2355. A coaster would not be likely to do so? No, I think not.
2356. Have you any further suggestions to offer to the Commission? The light on Cape Bridgewater I think is very desirable, as well as on Cape Northumberland for Portland Bay.
2357. Merely as a guide light for Portland Bay? Yes.
2358. The Commission understood you to say just now that a light in Portland was not necessary? Not in Portland.
2359. But you think a light on Cape Bridgewater is necessary? Yes; in the case of a vessel running for Cape Northumberland, she might miss a light there.
2360. Do you speak merely with reference to the over-sea trade? Yes; I do not think it is necessary for the coasters. [The Witness withdrew.]

— Captain William Horatio Hawkins examined —

- Captain W. H. Hawkins.  
12 Aug. 1856.
2361. What trade are you employed in? Between here, Warnambool, and Port Fairy.
2362. What vessel do you command? The "Queen" steamer.
2363. Are you familiar with Bass's Straits? I have been through the straits several times in command of ships going through the straits bound home round the Horn.
2364. Did you usually take the course through Banks's Straits? No, to the northward of Kent's Group.
2365. Then you can hardly say that you are familiar with Wilson's Promontory? Not as a coaster, but I can give my opinion upon it.
2366. Upon approaching Bass's Straits from the westward, is there any point on the coast of New Holland where you think it necessary to have a light erected on which there is not one.



- one placed at present? I think Cape Nelson and Cape Northumberland are the two points I should suggest. Captain W. H. Hawkins.
2367. Would that be for the over-sea trade? Yes, and also for the coasting trade. Cape Nelson would be a guide for Portland, and Cape Northumberland for Adelaide. 12 Aug., 1856.
2368. Do you think lights at both those places are required? I think they are required; but if you were to ask me distinctly which of the two I think most necessary, I should say Cape Northumberland. Cape Nelson would be more for a guide to Portland Bay.
2369. But Cape Northumberland would be no guide to Portland? No. It would be a guide to Adelaide.
2370. As a prudent mariner, in approaching Bass's Straits, bound to Port Phillip, what land would you try to make first? The Otway, decidedly.
2371. Are you of opinion that no master of a ship bound to Port Phillip would attempt to make any other land than the Otway? Not unless he had sustained some damage.
2372. Supposing he had easterly gales? Then I should not go to the northward of the latitude of the Otway in working to the eastward; I have worked along in easterly winds and kept as near as I could in the parallel of the Otway until I got close to Moonlight Head, and then worked along the land from there to the Otway.
2373. Have you seen the Cape Otway light? Frequently; I see it every time we pass.
2374. Is that a good light? A very efficient light.
2375. Have you considered the question of a light on King's Island? Yes.
2376. What is your opinion as to that? I think there should be a strong fixed light on Cape Wickham.
2377. You give that opinion as the result of great consideration on your part? Yes; I think that then with a light on the Schanck, when you come to have the light down on Swan Spit, even in the night time a vessel with a fair wind might go right up Port Phillip harbour.
2378. You are aware that there is considerable difference of opinion as to where a light should be placed on King's Island? I am.
2379. Have you heard the New Year Islands suggested as a place where the light should be put? Yes.
2380. You think that is the wrong position? Yes, I think Cape Wickham would be the best point.
2381. You are quite decided in your opinion as to Cape Wickham being the best spot? Yes.
2382. Do you think a light there would be more generally serviceable to the navigation of the straits than one on the New Year Islands? Yes, with a good light on Point Wickham a ship bound up the straits would see both that and Cape Otway.
2383. If a ship found herself, in thick weather, to the south of the New Year Islands do you think she would see a light on Cape Wickham? I think a light on Cape Wickham would be sufficiently elevated for that because it is the highest point of the island.
2384. Are you aware that the majority of the wrecks on King's Island have been on the west coast, to the south of the New Year Islands? Yes. I think a powerful light on Cape Wickham would be a protection to ships on the coast south of the New Year Islands, the distance is not great.
2385. You are decidedly of opinion that it is necessary to place a light on King's Island? Decidedly; I have always thought so.
2386. In approaching Port Phillip, coming from the westward, is there any point on which you would recommend that a light should be placed to facilitate the navigation? After rounding the Otway I think there ought to be a light on the Schanck.
2387. Would that be of service to vessels bound through the straits as well as to vessels bound to Port Phillip only? It would not be of much service to them, I think, because after rounding the Otway they would always shape a course for Curtis's Island.
2388. But vessels bound direct to Port Phillip would derive great advantages from it? Yes; they might run with a strong wind with safety, and with the Swan Spit light go right up.
2389. Is there any difficulty in seeing the lights on Shortland's Bluff now? No, there is no difficulty.
2390. If a vessel gets blown to the eastward of the port she cannot see them, can she? Then the light would be shut in by the land, and I do not think the light is very powerful there; as leading lights they are well placed, but they do not command a sufficient radius of vision.
2391. If a stranger outside of Port Phillip Heads could get a cross bearing of the Schanck light he would have great confidence in standing in for the Shortland's Bluff lights? Yes; he would know his position exactly.
2392. In proceeding to the eastward from Port Phillip, what is the next point on which you consider it necessary to have a light? I should say on the promontory; with that and the light in Kent's Group, I should say the straits would be well lit.
2393. Where would you place the light? On the extreme point of the promontory.
2394. Are you familiar with the land at the promontory? I have sighted it in going past.
2395. You do not know the land particularly? No.
2396. You think for the safe navigation of Bass's Straits a light on or close to the promontory is very desirable? I think so, decidedly.
2397. Have you been up to the eastward also? Only in command of ships bound home, passing through between the promontory and Kent's Group.
2398. Do you know the light on Kent's Group? Yes.
2399. Is that light, in your opinion, well placed? Yes.
2400. In passing through to New South Wales, would a light on the promontory be of any service to you? Yes.
2401. As master of an over-sea ship if a light were placed on the promontory would you make for it in preference to Curtis's Island? No, but it would be a very good guide, because with

Captain W. H. Hawkins. with strong southerly gales you might find yourself set up there. I was steering for Banks's Straits once in the "John Taylor" and picked up the Rodondo.

12 Aug., 1856. 2402. Have you found the set of the current in the straits generally controlled by the winds? Mostly so; I think that the current sets mostly to the eastward, but stronger of course when the wind is blowing from the westward.

2403. In making your passage through, would you still make for Curtis's Island with a large ship under sail bound through to Sydney? Certainly, I should give the promontory a wide berth.

2404. Would the promontory light be of any advantage to you if you were steering that course? Yes; it would give the position of the other dangers.

2405. Have you ever been round Cape Howe? No, not coasting. I have been round that way in going up to Manila.

2406. Have you ever been through Banks's Straits? No.

2407. Did you ever sight any of the coast to the northward before entering the straits? No, I kept out.

2408. You have stated that you have been a great deal in the coasting trade between Melbourne, Portland and Port Fairy? Not a very great deal; I am engaged in that trade now.

2409. Have you any suggestion to make to the Government of Victoria with respect to harbour lights? I think Warrnambool would be much the better for a light.

2410. Have you any further suggestions to make to the Commission? No. [*The Witness withdrew*].

Captain George Gilmore examined:—

Captain G. Gilmore. 2411. You command the "Telegraph" steamer? Yes.

2412. And you have commanded other steamers in the trade between Sydney and Melbourne, have you not? I have.

12 Aug., 1856. 2413. For how many years? Fifteen.

2414. How many voyages may you have made during that time? I have been engaged across the straits as well, and I suppose I have made 300 voyages.

2415. Have you also been engaged in the trade between Launceston and Melbourne? Yes.

2416. Then you have a thorough knowledge of the dangers which exist in the navigation of the straits in those particular routes? Yes.

2417. On the voyage from Sydney to Cape Howe, whether in coming to the southward or in standing back from Melbourne going to the northward, is there any point on the coast which, in your opinion, requires lighting, which is not now lighted? It is a fine coast; a light perhaps would be desirable on Cape St. George, but I do not know that it is absolutely wanted.

2418. Have you ever experienced in your voyages, when standing to the northward, that there is a considerable set in towards the land which might induce you to make the land on the starboard bow when you expected to make it on the port bow? During the summer months you make take it as a rule that there is a strong southerly current that will set a ship in a point or two to the westward of her course.

2419. If allowance is made during the summer months by steering a little more to the eastward than the true course, that danger may be avoided? Yes.

2420. Do you think it would be of assistance to the navigation generally to have a light on Cape St. George? Yes. It is an abrupt point, and the land runs out to the eastward some nine or ten miles; and it would also be an advantage in consequence of the shelter which Jervis Bay affords in easterly gales.

2421. Is there any other point on that coast that you think it would be advisable to light? No.

2422. After passing Cape Howe, bound to Melbourne, is there any point on the coast which you think should be lighted? The promontory is the next point.

2423. Would you advise a light on the promontory? From the position of Kent's Group light, being so far from the promontory, it is very rare that we see it, except in very clear weather, and a ship is liable to be set in towards the Seal Islands. Seven or eight months ago one of our vessels went ashore there, and another of our vessels, the steamer "Clonmel," was lost there.

2424. Then you would advise that a light should be placed on the promontory? Yes.

2425. Where would you advise that it should be placed? I think two lights would be requisite to make the navigation complete.

2426. Where would you place the lights if you placed one on each side? I would have one on the eastern Seal Island and the other on Cleft Island.

2427. Would it be possible to place a light on Cleft Island? I do not think it would. There are some of the Glennie Islands where it might be possible to place a light, but Cleft Island is extremely abrupt.

2428. If it were only intended to place one light, do you think that the south-east point of the promontory would be the best position for it? Yes, I think so; and it would be very desirable to have a light there.

2429. That would be open to vessels coming from the north east? Yes.

2430. Would not a vessel, if she approached within the neighbourhood of Seal Islands and did not open the light, haul out, supposing that her position was inside the course that she anticipated? It would be advisable to do so, but still you might be deceived by the inset.

2431. Would that difficulty be removed in any way if the light were put upon the Clonmel Rock? It would to some extent.

2432. You would place one light upon the south-easternmost Seal Island, and also one upon the island immediately on the west side of the promontory, Cleft Island if possible? Yes.

2433.

2433. And if not possible on Cleft Island, what next point would you suggest? Any one of the Glennie Islands. Captain G. Gilmore.
2434. Have you ever considered the possibility of putting a light on the Ten-foot Rock? I have; but I think it would be too low. 13 Aug. 1856.
2435. Have you passed by it frequently? Yes.
2436. Supposing the engineering difficulties could be overcome, a light at the height of 100 feet would give a radius of fifteen miles, would it not? Yes; but that would not take in the Seal Islands.
2437. Then you conceive it is absolutely necessary that whatever light should be placed upon the promontory its radius should extend to the Seal Islands? Certainly; the end of the promontory would do that. The extreme point of the promontory is quite defined in coming down from the eastward and not shut in by the high land. The light on Kent's Group is at too great an elevation, and in my opinion it ought to have been placed on Hogan's Island.
2438. Then you would have required no further light on the east side of the promontory? No; a light on Cleft Island then would have been quite sufficient.
2439. Do you think it is absolutely necessary for the safe navigation of the straits, considering the enormous trade that now exists between the two colonies of New South Wales and Victoria, that that point should be lighted in the best manner in which it can possibly be effected? I do.
2440. You say the south-east end of Wilson's Promontory is a well-defined point in coming from the eastward? Yes.
2441. But it would be obscured by the Glennie Islands to all vessels coming from the westward? Yes.
2442. But if a vessel had the advantage of a light on the Schanck, taking a fair departure from there, would she not in all probability pick up the light, and open it clear of the Glennie Islands without any fear of running upon them? I do not consider that for all steam purposes coming from Port Phillip down to the promontory the navigation is at all dangerous as compared with coming from the Cape Howe side; it is only a short distance from Port Phillip to the promontory, and you have bold headlands on the port land coming down—Cape Schanck and Cape Liptrap.
2443. Supposing a light were placed on Cape Schanck, would it better to light that part of the promontory that would be observed from the east side in preference to that which would be observed from the west? I should prefer lighting it on the east side. I never found any difficulty in going down to the promontory from the Port Phillip side.
2444. What is the distance from Gabo Island to the promontory? 200 miles.
2445. And you have also there the chance of the indraught into Corner Inlet? Yes.
2446. And that is the real danger which requires to be provided for? Yes, and the number of shoals and shoal water. I remember the circumstances of an Englishman, some years ago, running right into Corner Inlet. He thought he was round the promontory, and shaped his course and went right into Corner Inlet.
2447. You think the best way would be to put a light on one of the Glennie Islands and one on Seal Island? Yes.
2448. That would be the most perfect way of lighting the promontory? Yes; I would have the light on the Glennies as far south as possible; but I do not think Cleft Island would be accessible.
2449. Would it be possible to put a light on the Rodondo? I never landed on it, but I think it would be inaccessible.
2450. Would it not also be too high for a lighthouse? On the summit it is frequently capped with clouds.
2451. If it were possible to select a position on the Rodondo at the south of the promontory and not on the top of the Rodondo, would that be available for vessels coming in both directions? I think it would be.
2452. Is the Rodondo often capped? Yes.
2453. Would you advise that any further lights should be placed on the coast between the promontory and Melbourne Heads? I think a light at Cape Schanck would be very desirable.
2454. Would Cape Schanck be a useful point to light for vessels trading from Launceston as well? Yes.
2454. Would it be of great service to the Van Diemen's Land trade? Yes; because you do not open the lights at Shortland's Bluff until you are right abreast of the port.
2456. The lights on Shortland's Bluff are good leading lights are they not? Capital.
2457. Do they require any improvement in your opinion? I do not think so.
2458. Have you been to the westward at all from Port Phillip? No.
2459. Have you ever been to Adelaide? No.
2460. Have you ever considered the question of placing a light on King's Island? Yes; have been examined upon that before.
2461. Would you give the Commission the opinion which you have arrived at on that point, whether a light on King's Island would be advantageous to vessels using the straits either coming from the westward or going to the westward, coming from the eastward whether it would be likely to lead a man into danger in consequence of the position of the Harbinger Reefs, or whether it would be a beacon to warn him from danger, and therefore be beneficial? I decidedly think a light upon King's Island would be extremely beneficial.
2462. For vessels bound either to the eastward or the westward? Yes.
2463. Where should it be placed in your opinion? I think the northern point of the island would be the best position.
2464. Do you think that the vessels which have been lost there would have been saved if there had been a light at the north end of King's Island.
- 2465.

- Captain G. Gidmore.  
13 Aug., 1856.
2465. You conceive it would be beneficial to have a light there? I think it would.
2466. Have you considered the question of putting a light at the New Year Islands? I have, and I consider the northern point of King's Island would be the best position for a light.
2467. Have you any doubt that Cape Wickham would be the most desirable point? No, I have no doubt in my own mind upon that point.
2468. Have you been through Banks's Straits at all? Yes.
2469. Do you think they are sufficiently lighted? Very well lighted indeed; Goose Island and Swan Island are capital lights.
2470. Then with the exception of the lights you have mentioned which you think would be serviceable to navigation, that is the Schanck, the promontory, Cape George, and King's Island, are there any other suggestions as to lights which you would like to make? I do not think there are any other lights required, but with respect to the light on Gabo Island, it ought not to be in the centre of the island, in shore, it ought to be at the extreme point.
2471. Then you think the light is not properly placed there? I think it is not properly placed.
2472. Do you know whether there would be any engineering difficulties in placing it on the point of the island? No, on the contrary, the point of the island is a solid rock, whereas in the centre it is sand.
2473. Which lighthouse of all those you have mentioned do you think is most necessary to be erected in the first instance? I should prefer the Wilson's Promontory light, so far I am concerned.
2474. But for the general navigation of the straits do you think Wilson's Promontory should be the first point to be attended to? I think it would be the first light required. A good steady powerful fixed light it must be there, as Kent's Group is a revolving light.
2475. A first-class light? Yes; the point of Wilson's Promontory is beautifully adapted for a light, it is about an elevation of 200 feet.
2476. And it would be clearly visible to vessels north-east of the Seal Islands? Yes.
2477. In passing through the passage at the promontory, a light on the promontory itself would afford the best guide, would it not? Yes.
2478. Is there any shoal water on the western side of the promontory? No.
2479. And no danger but what is bold and easily seen? None at all.
2480. Have you frequently been on the eastern coast of Tasmania? No; I am not very familiar with that coast.
2481. Are prepared to give an opinion positively as to that coast? No. [*The Witness withdrew.*]

William Henry Norman, Esquire, examined:—

- W. H. Norman Esq.  
11 Aug., 1856.
2482. You are commander of the Victorian Government steam sloop "Victoria"? Yes.
2483. Are you familiar with Bass's Straits? No, not very.
2484. You have made a voyage through them, have you not? I have made two voyages through them, to and from Sydney.
2485. In one of the ocean mail steamers? Yes, one, and one in a sailing ship.
2486. Has it ever struck you as desirable that any light should be placed on the coast of New Holland to the westward of Cape Otway? Yes; I should consider it desirable that there should be a light on Cape Northumberland decidedly.
2487. Would that light be useful for over-sea ships? Yes, as well as for coasters.
2488. Did you ever make the land there? Yes.
2489. In a sailing ship? Yes, in working round from Adelaide.
2490. Not in coming from Europe? No, I made Cape Otway in coming from Europe; still it would be good land to make, it would be a weather light always to you.
2491. If you were proceeding to Melbourne from Europe, would you make Cape Northumberland light in preference to Cape Otway light? It would depend upon the weather. The weather permitting I would steer for the Otway light, but there are circumstances when a light on Cape Northumberland would be very useful, particularly if you had a scant wind. Supposing the wind to be from the south you might steer boldly on to that light, when you could not do so without that light.
2492. Would not a south-west wind give you a long range of coast under your lee if you made the the Northumberland light? Still you might go about. The coast there is, I believe, pretty well north-west and south-east. By making the Cape Northumberland light you would have the benefit of being able to stand so much further in towards Portland.
2493. That coast is very much dreaded by navigators, is it not? Yes, because there is no mark on it, and it is very low.
2494. In the event of a light being placed there, you think there would not be that degree of dread that there is at present on the part of vessels making that part of the coast? Certainly not.
2495. Have you ever considered the question of putting a light on King's Island? Yes, I have.
2496. What is your opinion with respect to that? There ought to be one there, certainly, and a first class light. It should be a true beacon light, a good strong first-class light. I cannot give an opinion as to the best position for a light, not being acquainted with the character of the island itself.
2497. In passing through the straits, which you have done on two occasions, has it appeared to you necessary to light any other part of the straits? Cape Schanck, I think, ought to be lighted, both for Port Phillip Heads and for the general navigation of the straits, particularly for sailing ships; that would give them a cross bearing, so that they might be in a position to get in next day.

2498. You think that a light on Cape Schanck would be advisable? Certainly.  
 2499. Going further to the eastward, is there any other point that strikes you as requiring to be lighted, if bound through the straits either to New South Wales or New Zealand?  
 Wilson's Promontory. I should certainly think a light would be very desirable either on the promontory, or on one of the islands that may be best situated for it, according as it may be proved by examination of the locality.

W. H. Norman Esq.  
 12 Aug., 1856.

2500. Do you think that is a point surrounded by dangers? Yes, and I think it would facilitate the trade between the two ports if there were a light there.

2501. But you are not prepared to say exactly where it would be best to put the light? No; that must, of course, be determined on by examination.

2502. After rounding Cape Howe is there any other point of the coast to the northward where you would recommend a light to be placed? I kept too far off the coast to judge of it, so that I cannot give an opinion.

2503. Have you seen the Shortland's Bluff lights? I have just seen them, and that is all. I only saw them once, and that was about two o'clock in the morning.

2504. Have you any further suggestions to offer to the Commission? No. [The Witness withdrew.]

Bloomfield Douglas, Esquire, a member of the Commission, examined:

B. Douglas, Esq.  
 12 Aug., 1856.

2505. Are you Master of the Trinity House of South Australia? Yes.

2506. Will you be good enough to state whether you are aware of any additional light-houses to those already established in South Australia, being necessary, and if necessary, whether any steps have been taken to erect them? Yes, a light is necessary on Cape Borda, at the western extremity of Kangaroo Island; the money has been voted by the Legislature, and immediate steps will be taken for its erection. The light will be a revolving light, with intervals of a minute. A light is also to be erected on Cape Northumberland, the money has been voted by the Legislature, and orders have been sent home for the lantern; and, I believe, at this time the tenders are accepted for the erection of the tower and other buildings. The Cape Northumberland light will be a bright red and green revolving light, with intervals of a minute.

2507. At what height will it stand above the level of the sea? The Cape Borda light will be about 350 feet above the level of the sea, and the Cape Northumberland light about 280 feet.

2508. Will they both be first-class lights? Yes; visible for a radius of twenty-five miles.

2509. Do you believe that the absence of a light in that particular locality has been the means of causing some of the wrecks that have taken place on that coast? Several wrecks have taken place in consequence of there being no light at Cape Northumberland.

2510. Which you think would have been obviated by the erection of a lighthouse there? Entirely so.

2511. Those lighthouses were contemplated by the Government of South Australia, and steps were taken to carry them out, before any idea was in existence as to this conference taking place? Yes, the money was voted for Cape Borda in the session of 1854; and I drew the attention of the Government to the necessity of a light on Cape Northumberland in April, 1855, and the money was voted the next session.

2512. Speaking from your experience of the coast, you having previously commanded a steam vessel on this coast, are there any other points at the entrance of the straits, or between Cape Northumberland and Port Phillip Heads, which you consider should be lighted in addition to the light on Cape Otway? I consider a light would be very useful on the north end of King's Island for over-sea ships; and, under certain circumstances, such as in the event of a continuation of heavy north-westerly gales and thick weather, that light might be also useful for coasters; there is no doubt that a light on King's Island would be very useful to vessels bound to the westward during strong south-westerly gales.

2513. From the evidence that has been adduced before this Commission, are you inclined to believe that the north point of the island would be a preferable position for a lighthouse to the islands situated in its immediate vicinity? I think so, for it appears that Point Wickham is considerably higher than the New Year Islands, and with a radius of vision of twenty-five miles a light would in all probability be seen over them from a certain distance.

2514. Have you ever sighted King's Island yourself? Never.

2515. In making for the straits, even although a light were erected upon King's Island, would you not recommend that in any sailing directions that should be drawn up after the straits were finally lighted, instructions should be given not to border on King's Island, unless it were necessary from the continuance of prevailing winds which brought vessels into that neighbourhood? Yes; but I think that in the event of a light being on the north end of King's Island ships might be able to keep further to the southward than they do now, and not run the risk of falling in with a lee shore between Moonlight Head and Cape Otway. With a strong southerly wind they find it difficult to scrape the land, and during the southerly gales there is a set to the northward and eastward.

2516. Do you consider that any additional light would be beneficial for the navigation of Port Phillip in addition to those already erected on Shortland's Bluff? I think for steamers there is no other light necessary beyond the leading lights into the heads, but for sailing vessels I think a light on Cape Schanck would be very desirable.

2517. That would enable them to take up their position with greater accuracy, by taking the cross bearings of the light without allowing themselves to be thrown too much to leeward as they are now occasionally? Yes; and a light there would be very useful in preventing a vessel getting too near the heads when it might not be the intention of the master to enter.

B. Douglas,  
Esq.

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2518. Do you think a light on Cape Schanck would be of any service to vessels bound to the westward? I do not think it would be of any service to vessels bound to the westward.
2519. But in working through to the eastward you think it would be beneficial? Yes; because vessels in strong easterly gales would be able to borrow on that shore and keep in smooth water.
2520. You have passed Wilson's Promontory, have you not? Yes, both in day and night. I consider a light would be very desirable upon the extreme point of Wilson's Promontory, and my impression is that a light there would answer all purposes. There is no doubt it would be shut in by Cleft Island and the Gleennie Islands in a certain bearing, but a vessel wishing to make it would only have to haul a little further to the southward, and she would then make the light, and might steer a direct course through; and for vessels from the eastward I think it would answer all the purposes for which a light would be required.
2521. The principal dangers are in coming from the north-east and not from the westward? Exactly.
2522. And you conceive that the point of the promontory would be the most useful and effective position on which a light could be placed? I think so.
2523. During the time you were navigating the coast of Australia was the Gabo Island light in existence? Yes.
2524. Do you consider that that light is a good and efficient one and properly placed? When I saw it it was very dim indeed. I saw the high land of Cape Howe before I saw the light.
2525. Have you at all observed the position of the lighthouse as to whether you think it is placed properly upon the Island? I have not been sufficiently close to observe that.
2526. In proceeding to the northward, after passing Gabo Island, if bound to Sydney, is there any part of the coast which, in your opinion, requires to be lighted? Yes; I think a light is requisite on Cape George.
2527. Have you ever observed, in standing to the northward, that there is a considerable indraught on that part of the coast? Not in standing to the northward, but in coming from the northward I have fancied that there was a considerable indraught from the eastward, in fact I made Gabo Island upon the port bow instead of upon the starboard bow.
2528. From your knowledge of the land on which point would you recommend the lighthouse to be erected? I cannot give a very valuable opinion upon the subject, but I think Cape George would be the most desirable point, having looked at the chart with some degree of attention.
2529. That point you think ought to be lighted? Yes, considering the amount of traffic and the great range of coast unlighted.
2530. With the exception of those lights which you have already stated that your Government has undertaken to erect, which of the other lights that you consider it advisable to put up should, in your opinion, be erected first as the most useful fairway light? Wilson's Promontory.
2531. That, in your opinion, is an important light? A very important light I think. I think many masters of vessels are extremely nervous in passing through Bass's Straits, and that they would prefer coming up the channel under the promontory if there were a light there.
2532. In establishing any new lights on the coast what class of lights would you recommend to be erected, the dioptric or catoptric? The catoptric. The dioptric lights are so much more difficult to repair, and the management of the concentric burners is so much more delicate, that I think the catoptric light would be the best.
2533. Do you know which light is the most economical of the two? No. I never had any of the dioptric lights under my control.
2534. You think the catoptric lights are sufficiently brilliant and are easily kept in repair? Yes; they should have very deep parabolic reflectors.
2535. What class of oil is used for the lighthouses in South Australia? We have tried several descriptions. We have tried cocoa-nut oil, and that we found answer very well in the summer, but it smokes very much; the colza oil also smokes a great deal. The oil we now use is the tea seed oil from China, and that answers very well, so much so, that a short time ago I purchased twelve months' supply for the different lighthouses.
2536. Is that oil obtainable at a lower price than the sperm or colza oil? It is about a shilling a gallon cheaper—it should not cost more than 7s. a gallon, we bought it at 7s. 6d. and we have since had it offered at 6s. 8d.
2537. Do you think it might be imported direct at a cheaper rate? Yes, at about 6s. 6d.
2538. Where is it principally brought from? From China.
2539. Does that oil continue in a fluid and useful state during cold weather? Always. I do not know at what temperature it would congeal, but we have never found it do so.
2540. At all events it is more economical in its use than either sperm or colza? Yes, and burns much cleaner; it has not a tendency to crack the cylinders, and the lantern is generally free from smoke. In my opinion it is the best oil that can be used for lighthouses.
2541. What course do you think ought to be adopted in the event of a revolving light ceasing to revolve from any defect in the machinery in order to enable that light to continue to revolve until some repairs can be effected? The lighthouse keeper should turn the wheel by hand, or he might assist in turning the frame.
2542. Do you consider it would be dangerous, if the revolving machinery got out of order, to allow the light to become a fixed light? Certainly; because when you got between the angle of the reflectors there would be no light visible.
2543. Is not the revolving portion of the machinery extremely simple? It is merely a weight and chain round a barrel and a couple of cog wheels.
2544. Could not any stoppage of the machinery be repaired by even an ordinary workman? I cannot imagine any stoppage except from the jamming of the weights in the trunk or the breaking of the chain. I do not imagine any accident can take place to the wheels, because  
there

there is no strain upon them; it would be almost an impossibility unless the metal used in the construction of the wheels was extremely faulty.

2545. Would it not be very easy to obviate the liability to accident by having a spare chain in each lighthouse? Yes. In fact I see no difficulty in the matter without difficulties are made.

B. Douglas,  
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12 Aug., 1856.

2546. Are you familiar with what is called the intermittent light? Yes; we have an intermittent light on Troubridge Island, but the term that is now adopted is always "revolving;" they are not called "intermittent," they are all called "revolving."

2547. What is the distinction between the light on Troubridge Island and the ordinary revolving light? Only that the intermission is so much more frequent—the light is visible every half minute which makes a flash, and the revolving light, generally speaking, is a minute and a half or two minutes, or two minutes and a half.

2548. Then it is nothing more than a quicker revolution? Yes; with the Troubridge light we have eight lamps with very deep reflectors and each lamp is presented to view every thirty seconds.

2549. Have you any colours in that light? None at all.

2550. You propose your Northumberland light to be a coloured light, do you not? Yes.

2551. In what way do you manage your lights in South Australia? By means of a Trinity Board.

2552. Do you levy a tax upon shipping for the support of them? Yes, a tonnage rate.

2553. Do you find that that course is not objected to by owners of vessels? Not at all; I think that owners and masters of ships are always very ready to pay light dues.

2554. If similar boards to that in existence in South Australia could be established throughout the whole of the Australian Colonies, do you conceive that a unity of action in the management of the lighthouses could be better obtained than can now be possibly obtained under the different systems of management which exist in all of them? Yes; I think it easier to communicate with established bodies like a Trinity Board than with the Government, where it would have to pass through so many departments.

2555. Then you consider that the Trinity Boards when once established should be independent bodies, capable of governing themselves? Yes, only amenable to the Legislature.

2556. Could not the masters of the several Trinity Boards meet occasionally on points involving the interests of the several Colonies, and decide matters for their mutual benefit which cannot now be decided? I think such a conference would be very useful.

2557. Have you any further suggestions to offer which you think would be useful to the Commission in arriving at a satisfactory conclusion on the several points which they have met to consider? No, I think any further suggestions I may have to make will be as a member of the Conference.

Adjourned.

WEDNESDAY, 20 AUGUST, 1856.

Present:

CAPTAIN KAY, R.N., | MR. BROWNE,  
CAPTAIN DOUGLAS.

Captain Joseph Lawson examined:—

2558. You command the "Ocean Monarch"? Yes.

2559. Have you made several voyages to these Colonies? Only two—one to Sydney and one to Melbourne.

Captain J.  
Lawson.

20 Aug., 1856.

2560. On both which voyages you came through Bass's Straits? Yes.

2561. During either time that you visited these Colonies have you ever had an opportunity of seeing King's Island or of considering whether it would be advisable or not to place a light on that island? Yes, I have seen it on both occasions, and on this last occasion it made such an impression upon me that but for other troubles that occurred afterwards, I should have written in the newspaper about it.

2562. Will you describe to the Commission under what circumstances you made the land on that occasion, and whether you conceive that if a light had been established on the island it would have been a guide to you, and would have enabled you to get out of the position with greater facility than you did? Yes. On Friday, the 30th May, I shaped my course for Cape Otway, bound for Port Phillip; during the middle of the night the vessel broke off from her course and laid down with her head towards King's Island; I found the vessel breaking off during the night, and being satisfied of my position I stood on towards the island; I made the land about daybreak, and judging from my experience, I thought I was a good deal farther off than I afterwards found I was, I stood close in and put my helm down with what I considered the New Year Islands, bearing north-and-by-east-half-east by compass.

2563. At about what distance? I should say at the distance of five or six miles, I could not recognise the place by the bearings at all, I could not make out where I was even then, not dreaming I was in the bight at all. I stood close in until I had the New Year Islands bearing north-and-by-east-half-east as I thought, and then I tacked and I suppose after I had stood out at least four or five miles, I was thunderstruck to see the Harbingers on the weather beam, about two or three miles distant, with the sea breaking mast head high over them.

2564. Then you found that instead of the New Year Islands bearing north-and-by-east as you anticipated, the north end of King's Island was bearing north-and-by-east? Yes. Then standing

- Captain J. Lawson.  
 29 Aug., 1856.
- standing out again, when I began to open the land outside the New Year Islands I at once saw where I was, and I was so astonished that it almost made my blood curdle.
2565. Then if it had not been daylight, your vessel would probably have been in considerable danger? No question about it.
2566. If there had been a lighthouse there you would have seen the tower and known your position directly? Yes.
2567. Do you consider that it would be advisable to place a lighthouse on King's Island? I think in all my experience I have never seen anything so dangerous as King's Island in its present unlighted condition. I think if a light were placed on Cape Wickham a vessel could not well be deceived wherever she brought up, because a vessel is never so far out of her latitude; any man can ascertain his latitude when he cannot ascertain his longitude.
2568. Do you think the north point of the island, Cape Wickham, would be a good place for a lighthouse? I do.
2569. Some persons have suggested the New Year Islands as a more desirable site for a lighthouse, what do you think of that? If the light were on Cape Wickham it would carry you clear of the dangers at the Harbingers, but a light at the New Year Islands would not do so well, a light on the north end of King's Island would enable you to stand in to make a fair course into the channel.
2570. Would it not also aid you in taking shelter under the lee of the island if you required to do so in heavy westerly gales? Yes. I think a light could not possibly be placed on the New Year Islands so that it could give any aid on the other side of the island, the land is far too high there.
2571. It has also been suggested to the Commission that a light situated on the north end of King's Island, being within the large reefs, the Harbingers, which lie off the north portion of it would be more likely to lead a ship into danger than out of it, what is your opinion on that point? Allow me to instance the Wolf Rock at Home; that is considerably farther off from any of the lighthouses than the Harbinger Reefs would be. I conceive that a light on King's Island would be the very thing to prevent a ship being lost on the island. It is absurd to say that because there is a danger and a light cannot be placed in front of it, therefore you should have no light there at all.
2572. Do you think it is a light that should be erected with all possible expedition? It should, indeed.
2573. As you have had no great experience beyond Melbourne Heads, perhaps you would not like to offer an opinion as to any further lighting? In working up from Cape Howe I felt the want of a light on Cape Schanck very much, because it would guard you from mistaking the position of Port Phillip, and it would enable you to stand across with a beating wind with great safety and comfort to yourself, but a light on King's Island is indispensable.
2574. And you would also advise a light on the Schanck? Yes; a light there would be an advantage to heavy vessels.
2575. Have you at all remarked the lights at the entrance of Port Phillip Heads? No; I came in in the daytime.
2576. Have you ever been to any of the Colonies to the westward? Never; I have spent the whole of my life in the India trade.
2577. In coming out to Melbourne or Sydney have you ever considered the necessity for a light on Cape Northumberland? No; it was only as to King's Island that I wished to express a very strong opinion, because I have had a great opportunity of judging of it, and I have seen the absolute danger of it; the Harbinger Reefs are fearful reefs. I look upon it as one of the most dangerous places I ever saw unlighted in my life. [*The Witness withdrew.*]

Adjourned.



1857.

## NEW SOUTH WALES

## MASSACRE AT WOODLARK ISLAND,

(OF CREW AND PASSENGERS OF BRIG "GAZELLE.")

*Ordered by the Legislative Assembly to be Printed, 27 February, 1857.*

RETURN to an *Address* from the Honorable the Legislative Assembly, dated 10 February, 1857, requesting that His Excellency the Governor General would be pleased to cause to be laid upon the Table—

“Copies of all Correspondence between the Government and all other persons with reference to the massacre of the crew and passengers of the brig “Gazelle,” at Woodlark Island.”

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## MASSACRE AT WOODLARK ISLAND.

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### No. 1.

CHARLES ST. JULIAN, ESQ., HAWAIIAN COMMISSIONER AND CONSUL GENERAL, to THE  
COLONIAL SECRETARY.

56-50.

*Hawaiian Commission and Consulate General,  
Sydney, 14 March, 1856.*

SIR,

I have the honor to request that you will call the attention of His Excellency the Governor General to the case of the Reverend John Mazzuconi, and the crew of the British brig "Gazelle," supposed to be detained in a state of destitution, if not captivity, either on Woodlark Island (near New Guinea) or on some of the islands in that vicinity.

2. The "Gazelle" sailed from Sydney on the 18th of August last, with supplies for the Roman Catholic Missionary Establishment at Woodlark Island, having been chartered for this purpose by the Reverend J. Mazzuconi, a priest of that establishment, who went in her a passenger. But soon after the departure of this vessel the other members of the Mission arrived here, having broken up their establishment in consequence of the severe illness with which they had been afflicted.

3. Since then nothing has been heard either of the "Gazelle" or of any of those on board of her; the probabilities are, that she has either been wrecked upon the reef at Woodlark Island, or (those on board of her not being aware of the Mission having been broken up, and being consequently off their guard,) that she has been captured by the natives of that island. In either case it may be reasonably supposed that some, at least, of those who sailed in her are living among the islanders, and in the most urgent need of relief. To say nothing of the Italian Missionary, there was a crew of fourteen persons on board the "Gazelle," all, I believe, British subjects, and many leaving families in Sydney.

4. Should His Excellency be pleased to send the "Torch," (as in the case of the lamented Mr. Strange and his companions,) to make the necessary search, the best time for so doing would be towards the close of the present month, or the beginning of April; at that season of the year the passage would be speedily made; and I am authorized to state, that of the three Missionaries from Woodlark Island now here, one, or, if necessary, two, would most gladly go with the vessel, to point out localities and to interpret.

Respectfully entreating the favor of an early reply,

I have, &c.,

CHARLES ST. JULIAN,

H. H. M. Commissioner, &c., and Consul-General.

THE HONORABLE

THE COLONIAL SECRETARY,

Sydney.

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### No. 2.

THE COLONIAL SECRETARY to CAPTAIN H. M. DENHAM, R. N.

*Colonial Secretary's Office,*

*Sydney, 17 March, 1856.*

SIR,

I am instructed by His Excellency the Governor General to refer to you the enclosed letter from Mr. St. Julian, H. H. M. Commissioner and Consul General at Sydney, soliciting a search for the crew of the brig "Gazelle," and to request that you will have the goodness to favor me with your opinion as to the probability of the statement contained in that communication, and as to the time which it would take to make the necessary exploration.

I have, &c.,

CAPTAIN H. M. DENHAM, R.N.,

H. M. Ship "Herald."

---

W. ELYARD.

No.

## No. 3.

CAPTAIN H. M. DENHAM, R.N., to THE COLONIAL SECRETARY.

*Her Majesty's Ship "Herald,"**Port Jackson, 19 March, 1856.*

SIR,

In reply to your letter of the 17th instant, enclosing, by desire of His Excellency the Governor General, a letter from Mr. St. Julian, H. H. M. Commissioner and Consul General at Sydney, soliciting a search for the crew of the brig "Gazelle," and requesting my opinion as to the probability of the statement contained in that communication, and as to the time which it would take to make the necessary exploration; I have to submit for the information of His Excellency,—

That, looking to the interval of seven months which has elapsed without any tidings of the people who left this port in the "Gazelle" last August, there is little hesitation in my mind to conclude that they have been detained, after losing vessel and boats on Woodlark Island, or the contiguous coast of New Guinea, or on some island in that vicinity; to determine which, I consider it would occupy a vessel three months, including the passage to and fro. In the event, however, of ascertaining the fate of the "Gazelle" at once, at her destined point, Woodlark Island, this service might be accomplished in six weeks; and it will greatly facilitate the issue if any of the recent resident Missionaries at Woodlark Island, and who are now in Sydney, were to go in the search vessel to point out localities and to interpret.

I beg leave to return Mr. St. Julian's letter.

I have, &amp;c.,

THE HONORABLE

THE COLONIAL SECRETARY.

H. M. DENHAM,

Captain R. N.

## No. 4.

THE COLONIAL SECRETARY to THE PORT MASTER.

*Colonial Secretary's Office,**Sydney, 26 March, 1856.*

SIR,

It having been suggested to send the "Torch," or some other suitable vessel, to Woodlark Island, or the contiguous coast of New Guinea, in search of the crew of the brig "Gazelle," I am directed by His Excellency the Governor General to request that you will furnish me, as soon as possible, with an estimate of the probable expense of the "Torch," or of a sailing vessel, for the voyage to and from Sydney, assuming it to be of three months' duration if sent.

I have, &amp;c.,

THE PORT MASTER.

W. ELYARD.

## No. 5.

THE PORT MASTER to THE COLONIAL SECRETARY.

*Port Master's Office,**Sydney, 7 April, 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 26th ultimo, No. 51, requiring, for the information of His Excellency the Governor General, an Estimate of the probable expense of the "Torch," or of a sailing vessel, for the voyage to and from Sydney to Woodlark Island, assuming it to occupy three months. In reply, I have to state, that the expense of the "Torch" would more than double that of a sailing vessel equally, if not better, suited for this purpose, as she could not carry a sufficiency of coal, and must resort to her sailing qualities.

I beg to forward two propositions which have been made, in consequence of the intention of His Excellency being known in town, and as that of Mr. Joubert is £380—certainly not unreasonable—I would respectfully recommend its acceptance, as there is no probability of cheaper terms being obtained, if there was any pressing necessity for an immediate decision.

If,

If, however, there was no such necessity, the "Spitfire" would answer the purpose, in my opinion, and the expense of sending her would be very trifling, as part of her establishment is permanent, and I think the vessel well suited for any such purpose. The saving would exceed two-thirds of the demand made by Mr. Joubert.

The "Spitfire" will be ready to go to-morrow with coals and stores for Gabo Island, and I hope will be back in a week or ten days, when, if approved of, she could be despatched in two days.

I have, &c.,

MERION MORIARTY,

Port Master.

THE HONORABLE

THE COLONIAL SECRETARY.

[Enclosure 1 in No. 5.]

Sydney, 7 April, 1856.

SIR,

Having heard that the Executive Government had instructed you to make some inquiries as to the expense of sending a vessel to the Island of Woodlark, in search of the missing brig "Gazelle," Captain Parkin, supposed to have been wrecked on that island, I beg to inform you, that the French Roman Catholic Missionaries, who had chartered the brig "Gazelle" on account of their brother Missionaries of Woodlark, had requested me to make the same inquiries on their behalf, with the view of submitting, themselves, a definite plan to the Government, and that I have offered to them to send the schooner "Favorite," of 90 tons, under the command of Captain Barrack, who is perfectly acquainted with the island and the natives of Woodlark, for the sum of three hundred and eighty pounds, including the passage of a Missionary formerly residing at Woodlark, who volunteers to accompany the expedition in search of his missing friend, the Rev. M. Mazzuconi.

As I stated above, the object of my inquiry was to enable the Missionaries to claim the Government's assistance in this matter, as the brig "Gazelle" is a British vessel, and entirely manned by a British crew.

I have, &c.,

D. N. JOUBERT.

Merion Moriarty, Esq.,  
Port Master, Sydney.

[Enclosure 2 in No. 5.]

Packet Office, George-street,  
Sydney, 7 April, 1856.

SIR,

We beg to offer the schooner "Wave," or the brig "Triton," the former 160, and the latter 250 tons burthen, for the conveyance of passengers, stores, &c., from Woodlark Island to this port, either, at the rate of £150 per month. The passengers to be provisioned by the vessel, or otherwise, at your option, at a fixed rate per head, hereafter to be determined upon.

We remain, &c.,

LAIDLEY, IRELAND, & Co.,  
Agents.

Captain Moriarty, R.N.,  
Sydney.

No. 6.

THE COLONIAL SECRETARY to THE PORT MASTER.

Colonial Secretary's Office,  
Sydney, 12 April, 1856.

SIR,

In acknowledging the receipt of your letter of the 7th instant, No. 44, I am directed by His Excellency the Governor General to inform you, that the offers therein transmitted of vessels to proceed in search of the crew of the missing brig "Gazelle" are declined.

I have, &c.

W. ELYARD.

THE PORT MASTER.

No. 7.

CHARLES ST. JULIAN, ESQ., to THE COLONIAL SECRETARY.

Hawaiian Commission and Consulate General,

Sydney, 1 April, 1856.

SIR,

I beg respectfully to re-call your attention to my letter, No. 56-50, of the 14th ultimo, having reference to the case of the Rev. J. Mazzuconi, and the crew of the British brig "Gazelle," supposed to be at present detained in a state of destitution, if not of captivity, either on Woodlark Island or on some of the islands in its vicinity.

2. As I had the honor to point out, in that letter, the best season for sending a vessel to the relief of these men would be at the latter end of March, or at the beginning of the present month. It is absolutely necessary, therefore, that not another hour should be lost; and if His Excellency is not in a position to render any assistance, *immediate* efforts must be made, by subscription or otherwise, for the charter of a small merchant vessel.

3. I must beg, therefore, most respectfully, the favour of an answer during the present day.

I have, &c.,

CHARLES ST. JULIAN,  
H.H.M. Commissioner, &c., and Consul General.

THE HONORABLE  
THE COLONIAL SECRETARY.

No. 8.

THE COLONIAL SECRETARY to CHARLES ST. JULIAN, ESQ.

*Colonial Secretary's Office,  
Sydney, 3 April, 1856.*

SIR,

In acknowledging the receipt of your further letter of the 1st instant, respecting the case of the Rev. J. Mazzuconi, and the crew of the brig "Gazelle," supposed to be at present in destitution or captivity on Woodlark Island, or some of the islands in its vicinity, I am directed by His Excellency the Governor General to inform you that the matter is now before the Executive Council.

I have, &c.,

W. ELYARD.

CHARLES ST. JULIAN, ESQ.,  
H.H.M. COMMISSIONER AND CONSUL-GENERAL,  
Sydney.

No. 9.

THE COLONIAL SECRETARY to THE FRENCH CONSUL.

*Colonial Secretary's Office,  
Sydney, 8 April, 1856.*

SIR,

I have the honor to inform you that the Governor General has laid before the Executive Council a letter, of which I enclose a copy, from Mr. St. Julian, Commissioner and Consul General for the Hawaiian Government, requesting that a vessel may be despatched in search of the passengers by the brig "Gazelle," which left the Port of Sydney for Woodlark Island on the 18th August last, with supplies for the Missionary Station there, and has not since been heard of. His Excellency has also laid before the Council a letter from Captain Denham, of H. M. S. "Herald" reporting the probable time that the proposed search would occupy if undertaken.

2. I have further the honor to inform you, that the Council cannot discover from the papers laid before them anything beyond the merest conjecture to shew that the passengers by the "Gazelle" are detained by the natives on Woodlark Island, as supposed by Mr. St. Julian, and that it is even more probable that the vessel was lost at sea. The Council cannot, therefore, recommend that a vessel should be specially sent for the purpose, but, under their advice, His Excellency has instructed me to bring the circumstances of the case under your notice, as the French Government have a Naval Establishment not very far from the locality indicated, and may, therefore, without much inconvenience, be able, perhaps, to cause inquiry to be made as to the fate of the vessel and her passengers and crew.

3. I beg to add that Mr. St. Julian has been referred to you, in order that he may furnish you with any further information which he may be able or desirous to afford on the subject.

I have, &c.,

W. ELYARD.

MONSIEUR SENTIS,  
CONSUL FOR FRANCE  
AT SYDNEY.

## No. 10.

THE COLONIAL SECRETARY to CHARLES ST. JULIAN, ESQ.

*Colonial Secretary's Office,  
Sydney, 8 April, 1856.*

SIR,

I have the honor to inform you that the Governor General has laid before the Executive Council your letter of the 14th ultimo, requesting that a vessel may be despatched in search of the passengers of the brig "Gazelle," which left the Port of Sydney for Woodlark Island on the 18th August last, with supplies for the Missionary Station there, and has not since been heard of. His Excellency has also laid before the Council a letter from Captain Deuham, of H. M. S. "Herald," reporting the probable time that the proposed search would occupy if undertaken.

2. I am further directed to inform you, that the Council cannot discover in the papers laid before them anything beyond the merest conjecture to show that the passengers of the brig "Gazelle" are detained by the natives of Woodlark Island, as supposed by you, and that it is even more probable that the vessel was lost at sea. The Council cannot, therefore, on such imperfect information recommend that a vessel should be specially sent for this purpose, but, under their advice, His Excellency will cause the circumstances of the case to be brought under the notice of the French Consul, as the French Government have a Naval Establishment not very far from the locality indicated, and may, therefore, without much inconvenience, be able to cause inquiry to be made as to the fate of the vessel and her passengers and crew.

3. In conclusion, I have the honor to refer you to the French Consul, in order that you may furnish him with any further information which you may desire to give.

I have, &amp;c.,

W. ELYARD.

CHARLES ST. JULIAN, ESQ.,

H. H. M. COMMISSIONER AND CONSUL GENERAL,  
Sydney.

## No. 11.

CHARLES ST. JULIAN, ESQ., to THE COLONIAL SECRETARY.

*Hawaiian Commission and Consulate General,**Sydney, 14 April, 1856.*

SIR,

On the receipt of your letter of the 8th instant, No. 421, conveying the decision of the Executive Council as to the matter referred to in mine of the 14th March, the supposed present condition of the crew and passengers of the British brig "Gazelle," and referring me to M. Sentis, the Consul of France, with a view to an appeal for assistance from the French establishment at New Caledonia, I *immediately* communicated this decision to those gentlemen interested in the fate of the persons alluded to, at whose instance I had written to yourself. It was by these gentlemen, and not by myself, that an application to the Consul of France, if judged expedient, would best have been made.

2. I have the gratification, however, of being able to inform you, that arrangements have been completed for causing the necessary search to be made without the hazardous delay of an appeal to New Caledonia, satisfied, it would seem, that there is strong ground for hope, and feeling that too much time has already been lost, the gentlemen alluded to had secured the services of the schooner "Favorite" prior to their receipt of my communication. She has either sailed, or is upon the very point of sailing, on her errand of mercy, and you will, I am sure, join with me in the earnest hope that this errand may be successful—that, with the blessings of Divine Providence, it may result in restoring to their homes the fifteen persons who left Sydney in this ill-fated vessel, and of whom, as I am informed, fourteen were British subjects.

3. It only remains for me to request that you will convey my most respectful thanks to His Excellency the Governor General for his kind attention to this matter.

I have, &amp;c.,

CHARLES ST. JULIAN,

THE HONORABLE

H. H. M. Commissioner, &amp;c., and Consul General.

THE COLONIAL SECRETARY.

No.

## No. 12.

CHARLES ST. JULIAN, ESQ., to THE COLONIAL SECRETARY.

*Hawaiian Commission and Consulate General,*

56-74.

*Sydney, 18 June, 1856.*

SIR,

Understanding that you have inquired, or purpose to inquire, into the circumstances under which the brig "Gazelle" was said to have been lost, and her crew murdered, at Woodlark Island, I beg to hand you herewith a copy of my own memoranda relative to these events. Although my inquiries have not been of a judicial character, and their results have been simply minuted for my own (official) use, they may, perhaps, be of some service in guiding your inquiries. It is with view only that I submit them.

2. I had the honor, by a letter to your predecessor in office, bearing date the 18th March last, to solicit attention to the (then) *supposed* loss of the "Gazelle," at or near Woodlark Island, and the presumed detention there of her passengers and crew. I had also, by a letter to the same honorable gentleman, on the 1st April, the honor to re-call attention to this subject, and to point out the necessity, as I then conceived, for some immediate aid. By a letter (No. 407) of the 3rd April, it was intimated to me that the matter had been laid before the Executive Council. By a second letter (No. 421) of the 8th April, I was informed that, for reasons therein stated, the Council could not recommend the despatch of a vessel to Woodlark Island, and an application to the French authorities at New Caledonia was recommended. To that letter, I had the honor, on the 14th April, to reply. It was on (I think) the following day that the "Favorite" sailed.

3. I had hoped, with a considerable amount of confidence, for a far happier result from the "Favorite's" voyage. There is, however, I am sorry to say no well-founded reason to doubt the truth of the melancholy tidings she has brought. Assuming them to be correct, and that the wreck and massacre were in September last, it is but too clear that the despatch in April of a ship of war could not have saved a single life. Should it be deemed expedient to make a further investigation upon the spot where the murders were perpetrated, or to take any steps for the punishment of the murderers, there is still time.

4. I have only, in conclusion, to beg, that if, at any time, any information or assistance which I can afford seems likely to prove useful, you will not hesitate to command it.

I have, &amp;c.,

CHARLES ST. JULIAN,

H. H. M. Commissioner, &c., and Consul General  
for New South Wales and Tasmania.

THE HONORABLE

THE COLONIAL SECRETARY.

## HAWAIIAN COMMISSION TO THE INDEPENDENT STATES AND TRIBES OF POLYNESIA.

*Sydney, 16 June, 1856.*

MEMORANDA relative to the loss of the British brig "Gazelle," of Sydney, and the murder of her crew at Woodlark Island—supposed to have taken place in September, 1855—and to the general character of the Woodlark Islanders.

(L.S.)

CHARLES ST. JULIAN,

H. H. M. Commissioner, &amp;c.

A.

*EXTRACT from the Sydney Morning Herald, of 14th June, 1856, said by the Rev. Pere Raimondi, (therein referred to,) to be, so far as it goes, "quite correct."*

## LOSS OF THE BRIG "GAZELLE," AND MURDER OF HER CREW BY THE NATIVES OF WOODLARK ISLAND.

The following account is an extract from the log of the schooner "Favorite," which was despatched from Sydney, to ascertain if possible, the fate of the "Gazelle," and her crew:—

At noon, Sunday, May 4th, in latitude 9°14' S., and longitude 153°27' E., off Woodlark Island. At 1 P.M., light breeze from E.N.E., all possible sail set. Discovered a wreck—apparently a brig—lying on her beam-ends, the lowermasts and bowsprit standing, and lower-rigging swinging about. The wreck then bore about W.N.W., distant 5 miles. At 2:30 P.M., abreast of the wreck, then distant 2½ miles, and made out that part of her stern was knocked away, and a portion of the copper torn from the port side, also several of the planks in her bottom gone, with the daylight showing through her.

At

At 4 P.M., off the entrance, hauled up for it, and stood in, when inside hove to for a canoe to come alongside with six native boys in it; one came on board, and was questioned by Mr. Raimondi; he (the boy) brought some cards with him, on which was engraved "Mr. W. T. Parkins," on one side, and in pencil on the reverse side was written "Gazelle." This boy's answers to the Missionary were very vague and unsatisfactory, so much so as made us think it not advisable to go up the harbour that night, and therefore we anchored near the entrance in 10 fathoms, sheltered from the eastward by an island. Loaded all the fire-arms, and clewed the sails up; set a double anchor-watch, and the night passed off quietly. Large fires were seen on shore, which the boy said were lit on account of the natives being afraid we intended to burn the village.

Mr. Raimondi gives the following account of the native boy's first tale to him:— "The brig "Gazelle" came on shore on the reef about the middle of September, 1855. The crew never landed, but went away with the boats at noon, the brig having been stranded in the morning. The crew went to the westward to Tronbiea, or Cape Denis, and two of them were killed at an island called Maddan, and he believed the rest were also killed at an island called Javonsee." But this tale, and the manner of telling, excited our suspicions further. This boy stopped on board, the rest went to their village.

Monday, 5th.—7 A.M., light winds from E.S.E. A canoe came off with four boys in it, most of them having been in Sydney with the missions. Two were taken in the cabin by Mr. Raimondi to be questioned. They both said "two men were killed at Maddan and the rest at Javonsee;" but all their reports were so vague, contradictory, and incredible, that they strengthened our suspicions as to the truth of the stories concerning this terrible murder. The boys then said they had some money which they had found in a trunk in the cabin. The money proved to be 8s. 6d. in silver and 9d. in copper, English coin. The old men at the village had told the boys to ask us if we were angry? as they wished to trade in pigs and yams—wishing us to come near the village. This request we believed to be only a decoy, as none of the old men had come off, and no canoes, excepting the one alongside. Their real intent, as since proved, was to get us up the harbour, separate us from the ship by trading, and then take the vessel. Our fears were still more awakened, on our telling the boys we intended visiting the wreck to judge for ourselves as to whether the crew were murdered on board or not, for they seemed greatly alarmed, and asked us—"How—how—how—how—will you tell—how can you know?" At 2 P.M., got the boat ready to go to the wreck, when one of the native boys previously belonging to the mission, said to Mr. Raimondi that he wished to speak with him before the ship sailed for Sydney. The boy was taken to the cabin, and on being offered a reward was induced to give the following particulars:— "The brig "Gazelle" being close to the reef, missed stays and went on shore. Shortly afterwards—on a plan already formed by the chief—eight canoes went off to the ship, six men in each, armed with concealed tomahawks, but without spears. Those savages were allowed to go alongside, with the intention of murdering all hands. The crew of the "Gazelle," at this time, had one boat out, and a second was being got over, in fact, all were employed about something when the natives boarded them; to all appearances quite friendly. The attention of Captain Parkins was first attracted by a cry behind him, when on looking round, he saw a native strike his tomahawk into the head of the Missionary on board; the Captain took a belaying pin from the rail to fell the savage, when another from behind struck him dead with his axe. The rest of the crew were all tomahawked in a few minutes—the vessel plundered of everything the natives fancied, and the rest destroyed. The dead bodies were left where they fell—but the boys who had no hand in this affair, shortly after threw them overboard." This story was corroborated by another boy. This prevented us from visiting the wreck, for when the boat was manœuvred there would only have been two hands left on board the ship. Having now received all the information we could, we hoisted in the boat, and made ready for sea. The boy who gave the account requested to be brought to Sydney, which we therefore did.

(Signed)

{ E. RAIMONDI, Missionary.  
A. BARRACK, Master.  
J. BENNETT, Mate.

## B.

*MINUTES of Inquiry relative to the loss of the Brig "Gazelle," of Sydney, and the Murder of her Crew, at Woodlark Island.*

## No. 1.

MINUTE of statements, by Puarer, a native of Woodlark Island (examined by Commissioner)—the Reverend Pere Raimondi interpreting, and making (in reply to questions from Commissioner) such explanatory statement (herein also minuted) as seemed necessary for the proper understanding of Puarer's account.

One morning about the middle of September last,\* declarant saw a Brig sailing near the reef at Woodlark Island. Went off, with four companions, with a canoe. Observed, on nearing the brig, that she was very close to the reef, and cried out to warn the Captain that she was "near to be wrecked." The Captain tried to put the vessel about, but she missed stays, and went on the reef. Declarant, with his companions, returned to their village—the village of Guasup. The young men asked them what was the matter with the vessel, and they replied she was wrecked on the reef. The Chief of this village, whose name is Origiuiamai, proposed

\* Pere Raimondi explains that the natives of Woodlark Island are able to distinguish and to point out, to those who understand them, the different months of the year, by the progress of cultivation, in their plantations.



proposed to his people to go and kill the crew. The villagers agreed to this.\* They left their spears and shields at home, to avoid suspicious appearances, and took only their tomahawks † which they hid under their garments. The natives went in ten canoes, five men in each canoe, to the brig. Declarant was compelled to go by his brother, who was anxious to participate in the attack and to share in the plunder, but paddled slowly, so that their canoe did not reach the reef until after the murder had been commenced; but saw the whole. As the natives approached the brig they made signs professive of friendship, and of a desire to afford help. While the fleet of canoes were nearing the reef other canoes were approaching which had been sent by the villages of Guasup, Berraquab, and Amanot, to assist (as declarant understood), in case of conflict. At this time three of the sailors were in the brig's boat, baling her out, so that the strength of the white men was divided. The natives saw that the whole of the crew, and the Captain in particular, were frightened and "flurried" at their position, and had lost presence of mind. They (the natives) left their canoes on the landward side of the reef, as it was impossible to get them alongside. Some of the natives stopped on the reef, but about thirty swam off to the vessel. The first native who tried to get on board was a man from Berraquab, whose name is Avicoar. The Captain, seeing him try to get on board, struck him with a rope. But at the same time a man named Tanar, a brother of Avicoar, and also from Berraquab, attempted to get on board, on the other side, and distracted the Captain's attention. This enabled Avicoar to get on board, and at the same time many others succeeded in getting on board in various places. Avicoar drew near the Missionary (the Reverend Pere Mazzuconi) holding out his hand, and taking that of the Missionary, to disarm suspicion. At the same instant he, with the other hand, proceeded to draw forth the concealed tomahawk, and the moment he had done so struck the Missionary with it on the neck. The Captain, apparently hearing the blow, turned round and endeavoured to pick up a belaying pin, but while doing this was struck on the back of the neck by Tanar with his tomahawk. ‡ Tanar had been appointed by the Chief to the especial duty of killing the Captain. The Missionary was killed by the first blow—Avicoar having a heavy tomahawk. But the Captain was not killed by the blow which struck him down; a second blow was struck by Tanar while the Captain was on deck, and this killed him. At the same time the three sailors in the boat were murdered. One of them knocked down a native by a blow with his fist. But they were surrounded by numbers, and were immediately killed by blows from the tomahawks of the natives. The men who *actually* killed these three sailors were Taguasup, Teekun, and Maiouam—all from Guasup. Almost at the same moment, the other men on board the vessel, all of whom were on deck, were murdered by the natives by blows from their tomahawks. The *actual* murderers were Aragné, Cumbruadeo, and Manoman, from Guasup; Tubut and Davao, from Berraquab; and Tamudot and Warenis, from Amanot. Others were close at hand ready to help, if necessary. The natives left the bodies where they fell, as not worth burying. § Declarant and some of his companions soon afterwards went on board and cast the bodies into the sea, "thinking it a pity they should lie on the "deck unburied." After the murder the people who had been engaged in it proceeded to strip the brig of everything removable. There was no division of the spoil; every one kept what he got, the strongest getting the most.

Declarant heard the Chief directing the attack, and heard the plan of it determined. Tried to dissuade the people from carrying it out, knowing from his residence in Sydney all about "men-of-war"—knowing also that it was the law of white men to kill those who had killed others—and knowing, and liking the Missionary whom he had seen on board, and with whom he had lived at Rook. The men laughed at declarant, however, and did not believe what he said about men-of-war; || all the women, also, were against the murder, but were not attended to.

Saw no arms or preparations for defence on board the vessel. There were ten muskets on board, which fell into the hands of the natives, but which have all since been broken, the natives not understanding them.

When the "Favorite" hove in sight the women were alarmed, and cried out that she was a vessel of war come to take vengeance; but Tanar and Tubut (two of the leaders in the "Gazelle" massacre) cried out that they "were ready for the man-of-war—were not afraid "but quite ready to fight." These men proposed to the people when the "Favorite" had stood in, to go and take her, so that she "might not get back and tell of what had happened to the "Gazelle." The Chief of Guasup ¶ was also willing, but some of his people were opposed to it, because, as the vessel was not wrecked, the crew "would not be troubled," and would be on their guard against surprise. After consultation it was arranged to allure some of the people of the vessel on shore, so as to divide their strength, and, first killing those on shore, to capture the vessel and kill the others.

The natives destroyed the boats of the "Gazelle," "smashing and sinking" them, and they tried to destroy the vessel, but could not succeed. Did not use fire.

\* Pere Raimondi states that it is a *law* among the people of Woodlark Island to kill those who are wrecked.

† Pere Raimondi states that these tomahawks were obtained from vessels by trade, for supplies, &c. The garment, he states, is a species of cincture, much more full than the ordinary "mars" of the Central Polynesians, and quite capable of concealing a tomahawk.

‡ Pere Raimondi states that Tanar is a very powerful man, and the natives, observing that the Captain was a big man, had, it is presumed, on this account, entrusted the killing of him to Tanar.

§ Pere Raimondi states that this is a mark of contempt for the slain. When the natives respect those whom they have killed their custom is to bury the bodies.

|| Pere Raimondi states that it is not the custom of the natives to attach any importance or credit to the sayings of young men; and that Puarer, in particular, was not a person at all respected by his countrymen.

¶ Pere Raimondi states that the chiefs on this Island have little real authority.

## No. 2.

*MINUTE of Additional Statements by the Reverend Pere Raimondi (in reply to Questions from Commissioner).*

Declarant believes the story of Puarer to be true. Puarer lived with declarant for three years at Woodlark Island, and warned declarant thrice when the natives had arranged (on three *separate* occasions) to kill declarant and his colleagues. Pere Mazzuconi resided at Rook. Puarer was in Sydney five years ago, and stayed for about fifteen days. Puarer is of a timid character, and was not generally liked among his countrymen because he was attached to the white men. Declarant does not believe that Puarer would or could conceal the truth from him. If Puarer had gone back he would doubtless have been killed for giving information. When the "Favorite" was leaving Woodlark Island, many of the natives followed her in their canoes. The "Favorite" had left in the morning, and was near the wreck of the "Gazelle," when those on board of her saw six canoes coming towards her, the natives on board of them paddling, apparently, as fast as they could. At the same time, by the aid of a spy-glass, they perceived many people on the point and on the reef. The natives considered, declarant has no doubt, that the people on board the "Favorite" were going to the wreck. The canoes and people were beyond range, but the "Favorite's" people fired towards the Islanders a small gun which was on board. At the report the men who were on the reef and on the point ran into the woods, while the canoes, which had hitherto been scattered, drew near each other. The gun was fired again, and the Islanders went back, while the "Favorite" continued her voyage.

MEMO.—Although I have taken every pains to elicit the truth, and believe that I have succeeded as fully as if, with the means of inquiry at my disposal, I had judicially investigated this case, these Minutes are only to be regarded as notes or memoranda of statements made by the persons therein named. They are neither guaranteed by oath nor solemn affirmation; but, as I have already intimated, I have no reason whatever to believe that the administration of oaths or the requirement of solemn affirmations would have changed a single statement. I do not suppose, indeed, that Puarer could have been made properly to understand the nature and obligations of either one or the other; and I cannot presume that Pere Raimondi would have said anything different, on oath, from what he has said on his word of honor.

Judging from his demeanour, I should think that Puarer was speaking truly. But he is palpably a mere savage, without the slightest feeling of horror or compunction in reference to the matters to which he refers. I do not doubt that, as he says, he took no part in the murder; but this was clearly more from fear than from gratitude or disinclination to commit crime, for he neither warned, nor attempted to warn, the missionary or the crew of the "Gazelle" of the natives' murderous intentions; and, when hastening back to tell his countrymen of the wreck, he must have pretty well foreseen the result. The attack of the natives was simultaneous—the result, as is usual in such cases, of a settled plan. The circumstantiality of Puarer's account arises, doubtless, in a great measure, from his having heard all that took place repeatedly and boastfully discussed among the murderers—as is their custom. I took care to inquire into and compare the statements which Puarer had made to others, and found them to correspond with those which I have minuted here.

(Initialled) C. S.

## C.

*MINUTE of Statements by the Reverend Pere Raimondi, affecting the general character of the people of Woodlark Island; and, in reference to two other Massacres of Shipwrecked Seamen.*

The French Mission was eight years upon the Island, but made no progress. Declarant considers the people of this Island to be hopelessly, or almost hopelessly, treacherous, ferocious, and hypocritical; but they are not cannibals. This is the third massacre in that quarter, of which declarant has heard. Fifteen years ago a whaler, called the "Mary," was wrecked on the Lachlan Islands, (small islands in the same neighbourhood) and the crew came with two large boats to Woodlark Island. They arrived at noon, and were all soon afterwards murdered, being divided from each other, and killed in detail.

Two years ago, when declarant was himself living at Woodlark Island, a canoe came from Tokun, and those who came by it acquainted declarant with the arrival at the latter place of a boat and seven white men, and that the natives had murdered these men; some of the Woodlark Islanders being there, and assisting. The moral effect of every such massacre among the Islanders is to make them boastful and self-confident, and to incite them to other deeds of blood.

Long impunity has induced the natives to disbelieve all they have heard about vessels of war, and the general power of the white men to protect their own race, and to punish those who injure them.

## No. 13.

E. BINGHAM, ESQ., to THE COLONIAL SECRETARY.

*Little's Cottages, Balmain,*  
21 June, 1856.

SIR,

When I had the honor of an interview with you, on the part of the friends and relatives of the Captain and some of the crew of the Mission brig "Gazelle," in company with the Rev. Mr. Raimondi, though the latter gentleman's narrative is so clear and circumstantial, I submit that it does not clear up, in any way, the strange writing on the cards; the Captain got those in a packet only two days ere he left Sydney—his vessel had a large house on deck, and in that they lived. Now, on board her there was nothing to smoke them; the light of the cabin was given by the binnacle lamp; it is very improbable that, for no apparent purpose, he should mutilate his cards thus; and we find that, after the vessel struck, he had no time—"one boat was out, and they were getting out the other"; if the tale is true. There was no time for thus writing, but one of the cards left with you for His Excellency's inspection was discolored, and then written on, and the writing, in the opinion of many, is recent, the pencil marks sharp and clear, leading us to infer that it was smoked in a native hut, and then written on.

You remarked to me, that if he or any of the crew were in a position to write "Gazelle," why not say more? To this I can only say, that it may have been done by the boy Duchie, or some of the men, unable to do much more, or knowing that the Missionaries were so many years there, and not aware of how much instruction they imparted, the writer may have been afraid of doing more. The complete massacre of all hands is quite a new feature to me, and not customary among the chain of islands westward of Papua, in the Arafura Sea, among whom, some years ago, and the Moluccan Archipelago, I have often been.

The very inadequate means at the disposal of the Rev. Mr. Raimondi prevented his making further inquiries; the wreck of the brig, no doubt, helped to make him credit the boy's story; but, I maintain, that although we have the fact of the murder of the three other crews who visited this barbarous island, it does not follow that this style of thing is to continue for ever; in either case, the supposed existence of any of the crew still at Woodlark, or their total massacre, I should hope that the Government will deem it only their duty to us to send down a strong force to make the necessary inquiries, and to punish the murderers; true, if gone they cannot improve matters so far as the "Gazelle" is concerned, but a severe punishment would deter them from doing so again. At this time there are some of our traders close there—the "Post Boy," the "Oberon," and others—any of them calling there, or even at the neighbouring islands, may share the same fate, for among all the groups the destruction and plunder of the "Gazelle" is known, and, small doubt of it, magnified.

The Dutch Government have, from similar atrocities, been compelled to use harsh measures towards some of the westward islands; but the effect on the natives has been in most cases very satisfactory. It would seem three of the principal villages are situated in one bay, a short half-mile apart. The burning of those, the canoes, which enable them to do so much harm, and from the difficulty of getting them, will be felt, and the destruction of the cocu-palms, would teach them that there was a power that could and would punish atrocities. If they have a law of this kind, it must be shewn to them that such a course brings a positive loss—the only convincing proof to a savage. This boy was afraid to join; he knew our power to punish, and a severe lesson would have a similar effect on his countrymen. The distance is small, and I would suggest to you that a steamer would be most effectual; one, I should think, could be easily obtained.

The "Gazelle" was well-manned, armed, and found in every respect, and Mr. Cuthbert had just refitted her, in his usual workmanlike style. Captain Parkin knew the character of the islanders, some of them at least, for I know, when a few years younger, he lost his uncle among them, and narrowly escaped himself. The effect on our Island trade will be very serious if this is allowed to pass unnoticed. We will be unable to get men to go there, and one of our principal trades will be suspended. I trust, Sir, you will enable me to inform the mothers, sisters, and wives of the crew, that the Government will take active measures to recover, or punish them, as the case may be.

The

The hurried visit of the "Favorite," and her narrative, though minute and circumstantial, save in the wreck of the brig, is far from satisfactory.

I have, &c.,

E. BINGHAM.

THE HONORABLE  
THE COLONIAL SECRETARY.

No. 14.

THE COLONIAL SECRETARY to E. BINGHAM, ESQ.

*Colonial Secretary's Office,  
Sydney, 28 June, 1856.*

SIR,

I beg to inform you that since the receipt of your letter of the 21st instant, I have conferred with M. Sentis, French Consul, and Captain Morris, of Her Majesty's Ship "Electra," now in this port, with a view to some measures being adopted with reference to the case of the brig "Gazelle," supposed to have been wrecked on Woodlark Island.

2. The orders under which Captain Morris is acting will not permit him to employ the "Electra" on this service; the French Consul is also unable to take any steps in this matter, as besides that there being but one French Ship-of-War at New Caledonia, which is required for that settlement, it would be necessary for him to refer to the Governor of Tahiti to obtain the required assistance.

3. Under these circumstances, I regret that as this Government does not feel authorized to charter a vessel for the purpose, it is not in a position to meet your wishes; but on the return of Captain Freemantle, of Her Majesty's Ship "Juno," now absent at the Islands, his attention will be drawn to the subject, and the information furnished by yourself and other gentlemen submitted to him.

I have, &c.,

STUART A. DONALDSON.

E. BINGHAM, ESQ.,  
Little's Cottages, Balmain.

No. 15.

THE COLONIAL SECRETARY to C. ST. JULIAN, ESQ.

*Colonial Secretary's Office,  
Sydney, 28 June, 1856.*

SIR,

With reference to my private communication to you, in reply to your letter of the 18th instant, relating to the case of the "Gazelle," supposed to have been wrecked at Woodlark Island, I have the honor to inform you that your letter will remain in this office for reference, and be submitted with other papers on the subject for the information of Captain Freemantle, of Her Majesty's Ship "Juno," now absent at the Islands, on his return to port.

I have, &c.,

STUART A. DONALDSON

C. ST. JULIAN, ESQ.,  
Commissioner and Consul General for the Hawaiian Government.

P.S.—I beg to add that I have conferred with M. Sentis, French Consul, and Captain Morris, of Her Majesty's ship "Electra," with a view to some steps being taken in this matter. The orders under which Captain Morris is acting will not permit him to employ the "Electra" in this service. The French Consul is also unable to take any steps with reference to this case, as besides that there is but one French Ship-of-War at New Caledonia, which is required for that settlement, it would be necessary to refer to the Governor of Tahiti to obtain the required assistance.

Under these circumstances, and as this Government does not feel authorized to charter a vessel for the purpose, it is not in a position to move in the matter; but the papers will be submitted, as above stated, to Captain Freemantle on his return.

No.

No. 16.

THE COLONIAL SECRETARY to CAPTAIN FREEMANTLE, R. N.

*Colonial Secretary's Office,**Sydney, 3 November, 1856.*

SIR,

I am directed by His Excellency the Governor General to transmit for your perusal the accompanying papers relating to the brig "Gazelle," wrecked at Woodlark Island, and to an application made to the Government for a search to be made for the passengers and crew.

You will observe that the Government was not in a position to comply with the application, and that it was decided to defer any proceedings in the matter until your return; and I am therefore now desired to request that you will favour His Excellency with your views on the subject.

I have, &amp;c.,

W. ELYARD.

CAPTAIN FREEMANTLE, R. N.,

H. M. Ship "Juno."

No. 17.

CAPTAIN FREEMANTLE, R. N., to THE COLONIAL SECRETARY.

*H. M. Ship "Juno," at**Sydney, 12 November, 1856.*

SIR,

I have to acknowledge the receipt of your letter dated the 3rd instant, enclosing several documents in reference to the loss of the brig "Gazelle" on Woodlark Island, in September, 1855, and requesting me to favour His Excellency the Governor General with my views on the subject.

This atrocious outrage can only be viewed in one light, nor can there be two opinions of the expediency of resorting to any practicable measures for putting a stop to similar acts of aggression on defenceless persons. I have carefully examined the papers which you have submitted to me, and I presume that I am required to state to what extent the services of the Navy can be rendered available to redress the injuries, and to inspire the savages on Woodlark Island with awe and respect for the power of the white man.

I must first observe that Woodlark Island is situated beyond the limits of the Australian Station, and that, under the peculiar circumstances of being left with no other cruiser under my orders besides the "Juno," I should hardly feel myself justified in departing from the Regulations of the Service by leaving the Station altogether destitute of any Ship-of-War to receive and act upon instructions from England by proceeding myself to an island in a remote locality and of intricate approach. It is also to be borne in mind that the appearance of a ship like the "Juno" off Woodlark Island would drive all the male inhabitants, if guilty of the alleged murders, into the bush, more especially those most deeply implicated in the crime; and that the only retaliation that could be obtained would be by the destruction of houses and canoes, and, perhaps, capturing innocent parties as hostages. The same may be said of any man-of-war. It therefore remains to ascertain from sound legal authority to what extent the evidence, so carefully collected by Mr. St. Julian, may be considered valid for undertaking a crusade against the inhabitants of Woodlark Island.

As the Supreme Court of New South Wales takes cognizance of criminal acts committed amongst the Polynesian Islands, and as the case, as far as it is known, can be laid before the Chief Justice, I am very desirous, before finally determining what measures I ought to adopt in the matter, to be instructed with the law as the case now stands, for it is most unlikely that any more direct or reliable testimony can be obtained here or on the spot. It is well known that no native of any of the South Sea Islands, when confronted with a Chief, will dare to say one word that would injure him.

I have been given to understand that both Father Raimondi and the boy Puarer have left Sydney, and, therefore, one of the chief channels for unravelling the facts connected with the fate of the "Gazelle" is shut off. Nevertheless, should the vessels expected to replace the "Fantomé" and "Electra" arrive on the Station, and His Excellency be satisfied

with

## MASSACRE AT WOODLARK ISLAND.

with the legality and propriety of a ship-of-war being sent to act summarily, and recommend the adoption of such a course after so long an interval, I shall not shrink from the responsibility of despatching a cruiser off the Station, provided always more urgent duties do not interfere, and that all suitable arrangements in the way of interpreting, and evidence for identifying the murderers, can be procured, so that the Officer in charge of so invidious a task may receive distinct and decisive instructions for his guidance.

I have, &c.,

STEPHEN G. FREEMANTLE,

Captain, and Senior Naval Officer in Australia.

P.S. The several documents which were forwarded in your letter are returned herewith.

THE HONORABLE

THE COLONIAL SECRETARY.

## No. 18.

THE COLONIAL SECRETARY to CAPTAIN FREEMANTLE, R.N.

*Colonial Secretary's Office,*

*Sydney, 15 November, 1856.*

SIR,

I am directed to acknowledge the receipt of your letter of the 12th instant, respecting the loss of the brig "Gazelle," and the massacre of her crew at Woodlark Island; and to inform you that, in compliance with your request, the correspondence and evidence collected in the case have been referred for the opinion of the Crown Law Officers, upon the receipt of which, a further communication will be made to you.

I have, &c.,

W. ELYARD.

CAPTAIN FREEMANTLE, R.N.,

H.M. Ship "Juno."

## No. 19.

THE COLONIAL SECRETARY to THE CROWN LAW OFFICERS.

*Colonial Secretary's Office,*

*Sydney, 15 November, 1856.*

GENTLEMEN,

I am directed to transmit the enclosed letter from Captain Freemantle, together with other papers, and correspondence, relative to the loss of the brig "Gazelle," and the murder of the crew at Woodlark Island; and to request that you will favour the Government with your opinion on the subject.

I have, &c.,

W. ELYARD.

THE HONORABLE THE ATTORNEY GENERAL, and

THE HONORABLE THE SOLICITOR GENERAL.

## No. 20.

THE CROWN LAW OFFICERS to THE COLONIAL SECRETARY.

*Attorney General's Office,*

*Sydney, 22 November, 1856.*

SIR,

In reply to your letter of the 15th instant, No. 766, covering letter from Captain Fremantle, together with other papers, and correspondence relative to the loss of the brig "Gazelle," and the murder of the crew on Woodlark Island, we have the honor to state we apprehend that the Supreme Court has no jurisdiction whatever in this case; and that the matter must be left to the Naval Authorities, as a question of War, and of national vengeance, or punishment, for the sake of future security to British subjects.

2. The evidence of the guilt of the parties alleged to have been concerned in the murder is quite sufficient to satisfy us.

We have, &c.,

W. M. MANNING,

Attorney General.

J. B. DARVALL,

Solicitor General.

THE HONORABLE

THE COLONIAL SECRETARY.

MASSACRE AT WOODLARK ISLAND.

15.

No. 21.

THE COLONIAL SECRETARY to CAPTAIN FREEMANTLE, R.N.

*Colonial Secretary's Office,  
Sydney, 25 November, 1856.*

SIR,

With reference to my letter of the 15th instant, apprising you that the correspondence and evidence relating to the loss of the brig "Gazelle," and the murder of her crew, at Woodlark Island, had been forwarded for the opinion of the Crown Law Officers; I am now directed to transmit, for your information, a copy of a Report received from them on the subject.

I have, &c.,  
W. ELYARD.

CAPTAIN FREEMANTLE, R.N.,  
H.M. Ship "Juno."

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1856.

NEW SOUTH WALES.

## RAILWAYS.

(RETURN TO AN ORDER RELATIVE TO PURCHASE, RECEIPTS, AND EXPENDITURE.)

*Ordered by the Legislative Assembly to be Printed, 14 August, 1856.*

RETURN to an *Order* of the Honorable the Legislative Assembly, dated 8 August, 1856, for—

“(1.) A Return shewing, the total amount expended in the purchase and construction of the Railway from Sydney to Parramatta, and in the purchase of land on account of the said Railway, up to the 30th June, 1856; the amount payable on account of contracts in course of execution on the 30th June, 1856, and also on account of any which have been entered on since that date; and the estimated cost of all further works, buildings, land, and rolling stock, which will be required to thoroughly complete the said Railway.

“(2.) A similar Return, of the sums which have been expended, and which have yet to be expended, on account of the Railway from Newcastle to Maitland.

“(3.) A similar Return, except as to the purchase, of the sums which have been expended, and which have yet to be expended, on account of the Railway from Parramatta to Liverpool.

“(4.) A Return shewing, the amounts received from Passengers, and for Goods and Parcels, on the Sydney and Parramatta Railway, from the 26th September, 1855, to the 30th June, 1856; the Expenditure incurred on account of working the line, during the same period, specifying the items of such Expenditure, and including the cost, if any, of renewing permanent way, buildings, or rolling stock; and the balance of Receipts from traffic on said Railway, paid to the Colonial Treasurer during the same period.

“(5.) A Copy of the Agreement made between the Railway Commissioners and Mr. Randle, for the working of the Sydney and Parramatta Railway, for the period of twelve months, from the 26th September, 1855.”

## RAILWAYS.

(RETURN TO AN ORDER RELATIVE TO PURCHASE, RECEIPTS AND EXPENDITURE.)

## No. 1.

## SYDNEY AND PARRAMATTA RAILWAY.

PURCHASE AND CONSTRUCTION.		£	s.	d.
By Loan by Government to Railway Company .....	£240,000	0	0	
Amount paid to Sydney Railway Company by Government .....	172,532	3	1	
Amount advanced to the Company by Commissioners	71,438	19	2	
Balance of Company's Account to London Agent, paid by Commissioners .....	854	4	0	
				484,825 6 3
Amount expended in construction by Commissioners, to 30th June, 1856 .....	74,230	4	5	
Compensation for Land .....	268	5	0	
Salaries and Office Expenses—say <i>half</i> charged to this Line .....	2,785	15	1	
Rent .....	300	0	0	
				77,584 4 6
<b>TOTAL</b> .....	<b>£562,409</b>	<b>10</b>	<b>9</b>	

Estimated Amount required to complete the Line, £7,982.

MEMO.—In addition to the amount set down for the completion of this Line, a sum of £5,000 will be required, for erection of workshops at the Sydney Terminus.

## No. 2.

## HUNTER RIVER RAILWAY.

(Newcastle to Maitland.)

	£	s.	d.
By purchase of Line .....	57,053	17	0
CONSTRUCTION, viz. :—			
By Amount paid on Contracts .....	£157,842	6	7
Amount still due on Contract .....	34,017	13	5
Salaries—say <i>half</i> charged to this Line.....	2,785	15	1
Probable Amount required to complete the Line to West Maitland .....	101,939	0	0
			296,584 15 1
<b>TOTAL</b> .....	<b>£353,638</b>	<b>12</b>	<b>1</b>

## No. 3.

## PARRAMATTA AND LIVERPOOL EXTENSION.

	£	s.	d.
By Amount paid on Contract .....	£58,935	10	0
Amount due on Contract .....	17,184	6	0
			76,119 16 0
Amount required to complete the Line, and for Rolling Stock, Stations, &c. ....			48,073 11 3
<b>TOTAL</b> .....	<b>£124,193</b>	<b>7</b>	<b>3</b>

## No. 4.

## No. 4.

## SYDNEY AND PARRAMATTA RAILWAY.

## RECEIPTS.

To Amount received from Passengers, from 26 September, 1855, to 30 June, 1856, both days included .....	£22,592 15 11
Ditto ditto for Goods and Parcels.....	1,279 15 4
TOTAL .....	£23,872 11 3

## EXPENDITURE.

By Amount paid Lessee, for working and maintenance of Line .....	£13,129 18 2
Salaries, Printing, and Office Expenses, paid by Commissioners .....	1,776 3 0
Amount paid into Colonial Treasury, being Balance of Receipts from Traffic, during the above period .....	8,966 10 1
TOTAL .....	£23,872 11 3

*Bligh-street, Sydney.*

I hereby agree to accept of a lease from the Commissioners for Railways, of the line of Railway from Sydney to Parramatta, for one year from the opening of the line, at the rate, and subject to the several stipulations and conditions mentioned in the annexed document; and I agree to execute, on demand, a formal lease, containing all usual and proper covenants.

WILLIAM RANDLE.

(True Copy.)

*Bligh-street, Sydney,  
August 14, 1855.*

To the Commissioners for Railways.

GENTLEMEN,

I beg to submit for your consideration, the following offer for working and maintaining the Sydney Railway, for a period of twelve months from the day of opening.

1. To maintain the permanent way and works, including locomotives, carriages, &c., in good order.
2. To work the line, running as many trains, and at such times as may be agreed upon, and at such rate of charges as shall be fixed by the Commissioners, and approved by me.
3. To find all Station-masters, Engine-drivers, Firemen, Guards, Signalmen, Policemen, Gatekeepers, Porters, Pointsmen, Cleaners, and all other labor whatsoever necessary for the efficient working of the line; also to provide proper uniforms for the above men, of a pattern to be approved of by the Commissioners.
4. To provide all oil, grease, tallow, waste, and firing.
5. To provide a Manager, whose time shall be entirely devoted to the proper working of the traffic, and the safety of the Public.
6. Commissioners to provide money takers, who shall receive all moneys for charges on merchandise, and the transit of passengers.
7. Commissioners to furnish locomotive engines, carriages, trucks, and all other rolling stock and machinery for the proper working of the line, and to provide means of water supply at the Sydney and Parramatta Stations.
8. In payment for the foregoing, I propose accepting 55 per cent. of the gross receipts.

I am, Gentlemen,

Your obedient Servant,

WILLIAM RANDLE.

9. The rolling stock to be kept in good repair, and to be returned in good order at the expiration of the agreement.

W. R.

*Sydney*

To the Commissioners for Railways.

*Sydney, 28 August, 1855.*

GENTLEMEN,

Having received an intimation from you, that the terms offered by me for the working and maintaining the Sydney Railway have been accepted, I beg to inform you that the line will be ready for opening to the Public on the 26th of September.

I remain, Gentlemen,

Yours obediently,

WM. RANDLE.  

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1856.

NEW SOUTH WALES.

## RAILWAYS.

(FURTHER RETURN RELATIVE TO EXPENDITURE.)

*Ordered by the Legislative Assembly to be Printed, 20 August, 1856.*

FURTHER RETURN to an *Order* of the Honorable the Legislative Assembly, dated 8 August, 1856, for,—

- “(1.) A Return, shewing the total amount expended in the purchase and construction of the Railway from Sydney to Parramatta, and in the purchase of land on account of the said Railway, up to the 30th June, 1856; the amount payable on account of contracts in course of execution, on the 30th June, 1856, and also on account of any which have been entered on since that date; and the estimated cost of all further works, buildings, land, and rolling stock, which will be required to thoroughly complete the said Railway.
- “(2.) A similar Return of the sums which have been expended, and which have yet to be expended, on account of the Railway from Newcastle to Maitland.
- “(3.) A similar Return, except as to the purchase, of the sums which have been expended, and which have yet to be expended, on account of the Railway from Parramatta to Liverpool.
- “(4.) A Return, shewing the amounts received from Passengers, and for goods and parcels, on the Sydney and Parramatta Railway, from the 26th September, 1855, to the 30th June, 1856; the expenditure incurred on account of working the line during the same period, specifying the items of such expenditure, and including the cost, if any, of renewing permanent way, buildings, or rolling stock; and the balance of receipts from traffic on said Railway, paid to the Colonial Treasurer during the same period.
- “(5.) A Copy of the agreement made between the Railway Commissioners and Mr. Randle, for the working of the Sydney and Parramatta Railway for the period of twelve months from the 26th September, 1855.”

# RAILWAYS.

(FURTHER RETURN RELATIVE TO EXPENDITURE.)

## No. 1.

### SYDNEY AND PARRAMATTA RAILWAY.

#### PURCHASE AND CONSTRUCTION.

	£	s.	d.
To Loan by Government to Sydney Railway Company ... ..	240,000	0	0
„ Amount paid by Government to Sydney Railway Company ..	172,532	3	1
„ Amount advanced to Sydney Railway Company by Commissioners ...	71,438	19	2
„ Balance of Company's account with their London Agent, paid by Commissioners ... ..	854	4	0
	<u>£484,825</u>	<u>6</u>	<u>3</u>
„ Amount expended by Commissioners in construction, to the 30th June, 1856 ... ..	£74,498	9	5
„ Proportion of Remittance to London Agent, for machinery, charged to this line ... ..	2,300	0	0
„ Proportion of Salaries and Office expenses charged to this line ... ..	<u>2,785</u>	<u>15</u>	<u>1</u>
	<u>79,584</u>	<u>4</u>	<u>6</u>
Total ... ..	<u>£564,409</u>	<u>10</u>	<u>9</u>

#### PURCHASE OF LAND.

Compensation paid by Company ... ..	16,388	2	5
Do. do. by Commissioners ... ..	268	5	0
	<u>£16,656</u>	<u>7</u>	<u>5</u>

N. B.—This sum is included in the foregoing total of £564,409 10s. 9d.

#### WORKS IN COURSE OF EXECUTION ON 30TH JUNE, 1856.

Estimated cost ... ..	7,982	3	2
Estimated balance due to London Agent for machinery ordered ... ..	5,250	0	0
Total ... ..	<u>£13,232</u>	<u>3</u>	<u>2</u>

#### WORKS UNDERTAKEN SINCE 30TH JUNE, 1856.

Temporary Smithy, and Tying machinery... ..	1,000	0	0
Goods, Sidings, &c. . . . .	1,000	0	0
Total ... ..	<u>£2,000</u>	<u>0</u>	<u>0</u>

#### ESTIMATED COST OF FURTHER WORKS, BUILDINGS, LAND, ROLLING STOCK, &c., NOW REQUIRED FOR THIS LINE, VIZ. :—

Works and Buildings ... ..	4,500	0	0
Machinery for Workshops ... ..	2,500	0	0
Unsettled Land Claims ... ..	12,000	0	0
Rolling Stock ... ..	12,000	0	0
Rails for Sidings, &c. ... ..	6,000	0	0
Incidental Works ... ..	5,000	0	0
Spare materials for repairs to Rolling Stock ... ..	2,500	0	0
	<u>£44,500</u>	<u>0</u>	<u>0</u>

GOTHER K. MANN,  
Chief Commissioner.

NOTE.—The Workshops and Machinery already erected, and those now estimated, will be available for the whole of the Southern Lines, and also for some time to come for the Northern Lines. The Rolling Stock is chargeable to the whole Southern Line.

No.

## No. 2.

## NEWCASTLE AND MAITLAND LINE.

## PURCHASE AND CONSTRUCTION.

To Amount paid to Hunter River Railway Company by				
Government	...	...	...	£57,053 17 0
„ Overdrawn Account of the Company, paid by Commissioners	...	...	...	16,891 10 3
				73,445 7 3
„ Amount expended in construction by Commissioners to 30th June, 1856				129,496 6 7
„ Proportion of Remittance to London Agent for Rails, Rolling Stock, and Machinery	...	...	...	50,900 0 0
„ Compensation for Land paid by Commissioners...	...	...	...	505 0 0
„ Proportion of Salaries and Office Expenses charged to this Line	...	...	...	2,785 15 1
				£257,132 8 11

Amount payable for Contracts in course of execution on the 30th June, 1856, viz.				
Contingent works	...	...	...	£34,017 13 5
Proportion of Balance due to London Agent for Rails and Machinery ordered, viz.	...	...	...	5,000 0 0
				17,900 0 0
				£56,917 13 5

## ESTIMATED COST OF FURTHER WORKS, BUILDINGS, LAND, ROLLING STOCK, &amp;c., NOW REQUIRED TO COMPLETE THIS LINE TO WEST MAITLAND, VIZ. :—

Extension to, and Station at Newcastle	...	...	...	£17,750 0 0
Ditto Coal Branch	...	...	...	44,800 0 0
Station at Hexham	...	...	...	2,000 0 0
Extension to, and Station at East Maitland	...	...	...	25,550 0 0
Ditto to West Maitland	...	...	...	34,250 0 0
Rails and Chairs for above Extensions	...	...	...	12,000 0 0
Sidings, Lodges, and Incidental Works	...	...	...	6,000 0 0
Unsettled Land Claims on present Line	...	...	...	6,000 0 0
Freight and erection of Engines and Rolling Stock ordered	...	...	...	8,000 0 0
Additional Rolling Stock	...	...	...	16,000 0 0
Spare materials for Repairs	...	...	...	2,500 0 0
Workshops and Machinery for the Northern Lines...	...	...	...	13,500 0 0
				£188,350 0 0

NOTE.—The compensation for land at Honeysuckle Point, Newcastle, is not included in the above amount.

GOTHER K. MANN,  
Chief Commissioner.

## No. 3.

## PARRAMATTA AND LIVERPOOL EXTENSION.

## CONSTRUCTION, &amp;c.

To Amount paid to Contractor	...	...	...	£58,935 10 0
„ Compensation for Land	...	...	...	5,800 0 0
„ Proportion of Remittance to London Agent for Rails and Machinery...	...	...	...	23,250 0 0
				£87,985 10 0

## WORKS IN COURSE OF EXECUTION ON 30TH JUNE, 1856.

To Amount still due on Contract	...	...	...	£17,184 6 0
„ Station Buildings, Sidings, &c.	...	...	...	8,300 0 0
„ Estimated Balance due to London Agent for Machinery	...	...	...	260 0 0
				£25,744 6 0

AMOUNT

## FURTHER RETURN RELATIVE TO RAILWAYS.

AMOUNT NOW REQUIRED FOR FURTHER WORKS ON THIS LINE.						
Station Works at Liverpool Terminus	...	...	...	...	...	£7,500 0 0
Lodges and incidental Works	...	...	...	...	...	2,900 0 0
Unsettled Land Claims	...	...	...	...	...	2,000 0 0
Total	...	...	...	...	...	£12,400 0 0

GOTHER K. MANN,  
Chief Commissioner.

## No. 4.

## SYDNEY AND PARRAMATTA RAILWAY.

*Return of Receipts and Expenditure, from 26th September, 1855, to 30th June, 1856.*

RECEIPTS.							£	s.	d.
To Amount received for Passengers, from 26th September, 1855, to 30th June, 1856, both days inclusive	..	...	...	...	...	22,592	15	11	
„ Ditto ditto for Goods and Parcels	...	...	...	...	...	1,279	15	4	
Total	...	...	...	...	...	£23,872	11	3	

EXPENDITURE.							£	s.	d.
By Amount paid Lessee for working and maintenance of Line	...	...	...	...	...	13,360	6	7	
„ Hire of Omnibus from 27th September to 31st October, 1855, at £4 per day	...	...	...	...	...	140	0	0	
„ Stationery, printing Ticket-books, forms, &c.	...	...	...	...	...	414	11	3	
„ Cash Boxes	...	...	...	...	...	14	18	10	
„ Tills, files, &c.	...	...	...	...	...	8	9	0	
„ Salaries of Officers employed by Commissioners on collection of Revenue	...	...	...	...	...	967	15	6	
„ Amount paid into Colonial Treasury, being balance of Receipts from traffic during the above period	...	...	...	...	...	8,966	10	1	
Total	...	...	...	...	...	£23,872	11	3	

GOTHER K. MANN,  
Chief Commissioner.

NOTE.—There has been no renewal of Permanent Way, Buildings, or Rolling Stock, since the opening of the Railway; the ordinary maintenance having been effected by the Lessee.

## No. 5.

(Copy)

Bligh-street, Sydney.

I hereby agree to accept of a lease, from the Commissioners for Railways, of the Line of Railway from Sydney to Parramatta, for one year from the opening of the Line, at the rate, and subject to the several stipulations and conditions mentioned in the annexed document; and I agree to execute, on demand, a formal lease containing all usual and proper covenants.

(Signed) WILLIAM RANDLE.

(Copy.)

Bligh-street,  
Sydney, 14 August, 1855.

To the Commissioners for Railways.

GENTLEMEN,

I beg to submit, for your consideration, the following offer for working and maintaining the Sydney Railway for a period of twelve months from the day of opening:—

1. To maintain the permanent way and works in good order.
2. To work the line, running as many trains, and at such times, as may be agreed upon; and at such rate of charges as shall be fixed by the Commissioners, and approved by me.



## FURTHER RETURN RELATIVE TO RAILWAYS.

5

3. To find all station masters, engine drivers, firemen, guards, signalmen, policemen, gatekeepers, porters, pointsmen, cleaners, and all other labour whatsoever necessary for the efficient working of the line; also to provide proper uniforms for the above men, of a pattern to be approved of by the Commissioners.

4. To provide all oil, grease, tallow, waste, and firing.

5. To provide a manager whose time shall be entirely devoted to the proper working of the traffic, and the safety of the public.

6. Commissioners to provide money takers, who shall receive all moneys for charges on merchandise, and the transit of passengers.

7. Commissioners to furnish locomotive engines, carriages, trucks, and all other rolling stock and machinery for the proper working of the line, and to provide means of water supply at the Sydney and Parramatta Stations.

8. In payment for the foregoing, I propose accepting 55 per cent. of the gross receipts.

9. The rolling stock to be kept in good repair, and to be returned in good order at the expiration of the agreement.

I am, &c.,

WILLIAM RANDLE.

True Copy—GOTHER K. MANN.

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*Sydney, 28 August, 1855.*

To the Commissioners for Railways.

GENTLEMEN,

Having received an intimation from you that the terms offered by me for the working and maintaining the Sydney Railway have been accepted, I beg to inform you that the line will be ready for opening to the public on the 26th of September.

I remain, &c.,

WILLIAM RANDLE.

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1857.

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NEW SOUTH WALES.

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## RAILWAY EXTENSION.

(EXPENSES ATTENDANT ON SURVEYS, &c.)

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*Ordered by the Legislative Assembly to be Printed, 13 March, 1857.*

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RETURN to an *Order* of the Honorable the Legislative Assembly,  
dated 20th January, 1857, for—

“(1.) An account, in detail, of the sums already expended  
“ for Surveys, Experiments, and preparations, for the  
“ Extension of Railways, under the authority of the Act  
“ of Council, 19 Victoria, No. 40, by which the sum of  
“ £50,000 was appropriated for those purposes.

“(2.) A Return, setting forth the names of all persons in  
“ receipt of salary or pay out of such sum of £50,000, the  
“ nature of their duties, the amount of their salaries, the  
“ localities in which their duties are discharged, the nature  
“ of the supervision under which they are placed, and the  
“ amount of work already done by them respectively.”

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## RAILWAY EXTENSION.

(EXPENSES ATTENDANT ON SURVEYS, &c.)

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### EXPENDED UNDER THE DIRECTION OF THE SURVEYOR GENERAL.

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#### No. 1.—OFFICERS OF HIS DEPARTMENT.

STATEMENT of the Amount expended on Account of Railways from 1st January  
to 31st December, 1856, chargeable upon the Vote of £50,000 for Railways:—

For Salaries and Allowances to Railway Surveyors...	...	...	...	£9,113	6	8
Ditto ditto Draftsmen	...	...	...	238	2	6
Travelling Expenses of the Deputy-Surveyor General	...	...	...	87	12	5
Contingent Expenses	...	...	...	80	13	0
				£9,519 14 7		
				£9,519 14 7		

*Surveyor General's Office,  
Sydney, 4 February, 1857.*

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RETURN

No. 1.—Continued.

RETURN of Sums expended under the direction of the Surveyor General, for Railway Surveys, under the authority of the Act of Council, 19 Victoria, No. 40, out of the Vote of £50,000, to the 31st December, 1856.

NAMES.	SALARIES.	ALLOWANCES FOR EQUIPMENT, MEN, PROVISIONS, TRAVELLING, AND ALL OTHER EXPENSES.		CONTINGENCIES.	TOTALS.	NATURE OF DUTY, AND LOCALITY IN WHICH DUTY IS DISCHARGED.	NATURE OF SUPERVISION.	AMOUNT OF WORK DONE TO 31ST DECEMBER, 1856.							REMARKS.			
		£ s. d.	£ s. d.					£ s. d.	£ s. d.	Total Sections Levelled, not Chained.	Trial Sections Chained.	Permanent Sections Chained.	Cross-levelling.	Sections Plotted.		Number of Maps.	Examination in Miles.	Surveying.
John Thompson	.....	.....	.....	87 12 5	87 12 5	Examining country for trial lines between Maitland & Singleton, and between Goulburn and Albury.....	UNDER THE SURVEYOR GENERAL.	Miles.	.....	.....	.....	.....	.....	.....	.....	.....	.....	Reports, and Illustrations, and Sketches, on each Line.
John Berry	400 0 0	400 0 0	.....	800 0 0	Preliminary and detail surveys from Campbelltown to Mittagong, by way of Menangle and Picton.....			.....	57	33½	70	35	4 Maps	50	.....	15,000	The whole of the levelling, plotting of sections, calculating of gradients, has been done by the late Mr. Condon. The chaining for levels generally, and sometimes the marking out, by Mr. Kelly.	
Edmond Sanderson	400 0 0	400 0 0	.....	800 0 0				(Assisted) 1¼	(Assisted) 33½	18¾	.....	(Assisted) 50	7,780	7,780	The marking out, and sometimes chaining for levels, tracings of plans and sections, hill-sketching and calculating of gradients, by Mr. Oliver. The exploration by all three.			
Thomas Berry	400 0 0	400 0 0	.....	800 0 0				Assisted	(Assisted) 33½	54½	.....	.....	8,020	8,020				
TOTALS								58¼	33½	143¼	35	4	50	15,800	.....	The examination of the country has been carried on, the trial sections set out, and the greater part of the surveying executed, by Mr. Rowland. The levelling and plotting, and finishing plans and sections, has been done by Mr. Twynam, together with some surveying. Mr. Hicks, up to May, 1856, executed part of the survey of West Maitland, levelled 8 miles of trial sections not chained, 15 miles of trial sections chained, and 10 miles of check levels. The only work sent in is on a large tracing plan, furnished from this Office, on which has been added the levels between Brisbane and Ipswich. A further report of work performed is still waited for. Has been employed as draftsman, in the department, during the year. Ditto ditto one month. Granted forage, allowance for two horses, whilst engaged in a preliminary survey, extending from Maitland to the Liverpool Range. For bookbinding and stationery supplied during the year.		
John Condon	400 0 0	400 0 0	.....	800 0 0	Preliminary and detail surveys, from Gibraltar Gap to Goulburn.....	100	40	.....	.....	113	3	170	2,300	.....				
Thomas Oliver	400 0 0	400 0 0	.....	800 0 0		Preliminary and detail surveys, from Maitland to Singleton, and from thence to the Liverpool Range..	85	195	42	200	362	23	.....	3,500	.....			
John Kelly	390 0 0	390 0 0	.....	780 0 0			.....	.....	.....	.....	.....	.....	.....	.....	.....			
Isaiah Rowland	400 0 0	400 0 0	.....	800 0 0	Preliminary and detail surveys, from Brisbane to Ipswich, and from thence to Warwick.....	.....	.....	.....	.....	.....	.....	.....	.....	.....				
Edward Twynam	400 0 0	400 0 0	.....	800 0 0		.....	.....	.....	.....	.....	.....	.....	.....	.....				
Thomas H. Hicks	166 13 4	166 13 4	.....	333 6 8	.....	.....	.....	.....	.....	.....	.....	.....	.....					
Henry Sanderson	400 0 0	400 0 0	.....	800 0 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
John Malley	400 0 0	400 0 0	.....	800 0 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
John H. Grogan	400 0 0	400 0 0	.....	800 0 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
R. M. Pearson	225 15 0	.....	.....	225 15 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
J. M'Gann	12 7 6	.....	.....	12 7 6	.....	.....	.....	.....	.....	.....	.....	.....	.....					
W. R. Collett	.....	.....	36 18 0	36 18 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
F. Mader	.....	.....	17 10 0	17 10 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
Joseph Cook, & Co.	.....	.....	26 5 0	26 5 0	.....	.....	.....	.....	.....	.....	.....	.....	.....					
9,519 14 7					Total levelled } 75½		Total surveyed } 510											

RAILWAY EXTENSION.

## No. 2.—DETACHMENT OF SAPPERS AND MINERS.

RETURN of the SUMS expended for RAILWAY SURVEYS, by the Detachment of Royal Engineers, under the command of Captain J. S. HAWKINS, under the authority of the Act of Council, 19th Victoria, No. 40; up to 31st December, 1856.

SALARIES.							
Officer Commanding Detachment ... ..	...	...	...	...	...		
Regimental Pay—1 sergeant, 1 corporal, 2 2nd corporals, 13 sappers ...	...	...	...	...	...	412	11 7½
Colonial Allowance—4 N. C. Officers, 13 sappers	...	...	...	...	...	165	6 0
Working Pay—ditto ditto	...	...	...	...	...	1,063	14 9
Chainmen's wages	...	...	...	...	...	250	17 6
							2,627 8 0½
ALLOWANCES.							
Forage to Officer Commanding ... ..	...	...	...	...	...	48	18 0
Field and lodging allowance to detachment	...	...	...	...	...	130	18 6
Provisions and ration money for ditto	...	...	...	...	...	391	16 1
Fuel, light, and water, at Parramatta ...	...	...	...	...	...	30	14 7
Provisions and ration money for chainmen	...	...	...	...	...	130	12 8
							732 19 10
CONTINGENCIES.							
Travelling expenses of Officer Commanding	...	...	...	...	...	2	16 0
Forage for surveyor's horses	...	...	...	...	...	53	8 11
Purchase of horses...	...	...	...	...	...	333	10 0
Purchase of articles of equipment	...	...	...	...	...	718	16 9
Purchase of instruments	...	...	...	...	...	225	19 3
General incidental expenses, repairs, horse-shoeing, &c.	...	...	...	...	...	73	11 0
Office furniture at Parramatta	...	...	...	...	...	8	18 0
Barrack furniture at Parramatta	...	...	...	...	...	190	4 0
Stationery	...	...	...	...	...	60	13 11
Postage	...	...	...	...	...	8	8 7
Medical attendance on the Detachment	...	...	...	...	...	24	7 9
Cost of removal of Detachment from Hobart Town	...	...	...	...	...	182	1 3
							1,882 15 5
TOTAL ... ..						£	5,243 3 2½

J. S. HAWKINS,  
CAPTAIN, R.E.

6 February, 1857.

RETURN of the Detachment of ROYAL ENGINEERS under the command of Captain J. S. HAWKINS, employed on Railway Surveys, under the Act of Council 19 Victoria, No. 40, up to the 31st December, 1856, shewing their names, the nature of their duties, and the localities in which they were discharged, the amount of their salaries, the nature of the supervision under which they are placed, and the amount of work performed by them respectively.

RANK AND NAMES.	NATURE OF THEIR DUTIES AND THE LOCALITIES IN WHICH THEY WERE DISCHARGED.	SALARIES PER DIEM.			WORK PERFORMED.	
		Regimental Pay.	Colonial Allowance.	Working Pay.	Surveyed Miles.	Levelled Miles.
Captain J. S. Hawkins	In command of the detachment, and in general superintendence and supervision of the work	£825	per annum.			
Serjeant Henry Quodling	In charge of the office at Parramatta, receiving and issuing stores, keeping cash accounts, attending to correspondence, and conducting the duties of the detachment, under the Commanding Officer	s. d.	s. d.	s. d.		
		2 8½	1 0	7 0		
Corporal Alfred Francis	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st April to 29th October, exploring and levelling a series of trial lines between Fairfield station and Prospect, and from thence to Penrith.—30th October to 31st December, levelling, and making plans and sections of Bell's Line of Road from Richmond towards Hartley	2 5½	1 0	5 9	....	47½
2nd Corporal Thomas Kennedy	From 27th February to 5th August, making tracings of plans received from the Survey Department.—5th August to 29th October, making plans and sections of trial lines between Fairfield station and Prospect, and from thence to Penrith and Windsor.—30th October to 31st December, surveying and drawing plans and sections of the line of road from Penrith towards Bathurst	2 0½	1 0	5 0	20½	....
Carried forward.....					20½	47½

RAILWAY EXTENSION.

RETURN, &c.—Continued.

RANK AND NAMES.	NATURE OF THEIR DUTIES, AND THE LOCALITIES IN WHICH THEY WERE DISCHARGED.	SALARIES PER DIEM.			WORK PERFORMED.	
		Regimental Pay.	Colonial Allowance.	Working Pay.	Surveyed Miles.	Levelled Miles.
		s. d.	s. d.	s. d.		
	Brought forward.....				20½	47¾
2nd Corporal Martin Lavelle..	From 27th February to 31st March, making tracings of plans received from the Survey Department, adjusting instruments, &c.—1st to 21st April, levelling trial line between Fairfield station and Prospect.—22nd April to 31st December, exploring, surveying, and levelling a trial line from Port Stephens to Armidale. ....	1 11½	1 0	5 0	29½	35
Sapper John Ashplant .....	From 27th February to 31st March, employed as a carpenter, preparing equipment.—1st April to 13th May, exploring, surveying, and levelling trial line from near Parramatta to Prospect.—8th August to 21st September, preparing equipment.—22nd September to 31st October, surveying and levelling the line of road from Parramatta to Penrith, &c.—4th December to 31st, surveying and levelling trial line, through Parramatta towards Windsor and Penrith .....	1 4½	0 6	5 0	51½	25½
Sapper Michael Given.....	From 27th February to 6th April, employed as a carpenter, preparing equipment.—7th April to 29th October, assisting as staff-holder, chainman, &c., and occasionally surveying portions of the trial lines from Fairfield station, through Prospect, to Penrith.—30th October to 30th November, assisting to survey and level a portion of Bell's Line of Road (Richmond to Hartley).—4th December to 31st assisting to survey and level trial line, through Parramatta, towards Windsor and Penrith.....	1 4½	0 6	4 9	25½	.....
Sapper George Melrose .....	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st April to 25th May, assisting as staff-holder, chainman, &c., and occasionally levelling portions of the trial lines from Fairfield station to Prospect.—26th May to 11th November, making tracings of plans received from the Survey Department, preparing copper and engraving plates for protractors, and for graduated paper for levelling staves.—12th November to 24th December, exploring the country between the Nepean and Bathurst, with a view to railway extension .....	1 3½	0 6	4 9	.....	.....
Sapper Charles Richardson ..	From 27th February to 6th April, employed as a carpenter preparing equipment.—7th April to 11th November, assisting as staff-holder, chainman, &c., on the survey and levelling of the trial lines from Fairfield station; through Prospect, to Penrith.—12th November to 24th December, assisting to explore the country between the Nepean and Bathurst .....	1 3½	0 6	4 9	.....	.....
Sapper Samuel Keely .....	From 27th February to 13th May, making tracings of plans received from the Survey Department.—8th August to 19th November, making tracings of plans received from the Survey Department, and making tents, &c., for equipment.—20th November to 31st December assisting to explore the country between Goulburn and Yass.....	1 3½	0 6	5 0	.....	.....
Sapper Alfred Vine .....	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st April to 23rd December, assisting as staff-holder, chainman, &c., and occasionally levelling portions of the trial lines from Fairfield station to Prospect, and from thence to Penrith and Windsor.....	1 3½	0 6	4 9	.....	1½
Sapper Henry Grierson .....	From 27th February to 6th April, employed as a carpenter preparing equipment.—7th April to 23rd, assisting as staff-holder, chainman, &c., on the survey and levelling of a trial line from near Parramatta to Prospect.—24th April to 22nd September, preparing equipment.—23rd Sept. to 30th, assisting to survey and level part of the line of road from Parramatta to Penrith.—1st October to 3rd Dec., preparing equipment.—4th December to 31st, assisting to survey and level part of the trial line through Parramatta, towards Windsor and Penrith.	1 3½	0 6	4 9	.....	.....
	Carried forward.....				127	108¾

## RAILWAY EXTENSION.

RETURN, &amp;c.—Continued.

RANK AND NAMES.	NATURE OF THEIR DUTIES, AND THE LOCALITIES IN WHICH THEY WERE DISCHARGED.	SALARIES PER DIEM.			WORK PERFORMED.	
		Regimental Pay.	Colonial Allowance.	Working Pay.	Surveyed Miles.	Levelled Miles.
		s. d.	s. d.	s. d.		
	Brought forward.....				127	108 $\frac{3}{8}$
Sapper John Preston .....	From 27th February to 20th April, employed as a carpenter preparing equipment, making tracings of plans received from the Survey Department, copying documents, &c.—20th April to 31st May, assisting as staff-holder, chainman, &c., on the survey and levelling of the trial line from Fairfield Station to Prospect.—22nd May to 31st December, preparing equipment, copying, and checking accounts.....	1 3 $\frac{1}{2}$	0 6	4 9	.....	.....
Sapper Edwin H. Fearuside ..	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st to 21st April, assisting as staff-holder, chainman, &c., on the survey and levelling of the trial line from Fairfield Station to Prospect.—22nd April to 31st December, assisting to explore, level, and occasionally surveying portions of the line from Port Stephens to Armidale .....	1 3 $\frac{1}{2}$	0 6	4 6	12	...
Sapper John Wood .....	From 27th February to 31st March, employed as a carpenter preparing equipment.—1st April to 17th November, exploring, surveying, and levelling trial lines, from near Parramatta to Prospect, and from thence to Penrith and Windsor.—20th November to 31st December, exploring the country between Goulburn and Yass, with a view to Railway extension.....	1 3 $\frac{1}{2}$	0 6	5 0	1	109 $\frac{1}{2}$
Sapper Henry A. Neely .....	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st April to 4th November, assisting to explore, surveying, and levelling the trial lines from near Parramatta to Prospect, and from thence to Penrith.—5th November to 31st December, surveying Bell's Line of Road, from Richmond to Hartley .....	1 2 $\frac{1}{2}$	0 6	4 3	47 $\frac{1}{2}$	11 $\frac{1}{2}$
Sapper George Leslie .....	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st April to 10th November, exploring, surveying, and levelling the trial lines, from Fairfield Station to Prospect, and from thence to Penrith and Windsor.—11th November to 31st December, levelling the line of road, from Penrith towards Bathurst.....	1 3 $\frac{1}{2}$	0 6	4 9	107	21 $\frac{1}{2}$
Sapper George Jamieson ....	From 27th February to 31st March, making tracings of plans received from the Survey Department.—1st April to 23rd December, exploring, levelling, surveying, and drawing plans and sections of the trial lines from near Parramatta to Prospect, and from Fairfield to Prospect, and thence to Penrith..	1 2 $\frac{1}{2}$	0 6	4 3	17 $\frac{1}{2}$	57 $\frac{1}{2}$
	TOTAL.....				312	309 $\frac{3}{8}$

At a cost of £5,243 3s. 3 $\frac{1}{2}$ d.

J. S. HAWKINS, Capt. R.E.

6 February, 1857.

## REMARKS.

Working pay is only issued when the men are actually employed.

A Field allowance of 1s. per diem is granted to the men employed in the field, when actually at work.

Rations, or an allowance in lieu thereof, is granted to the men employed in the field.

An allowance for rations, and fuel, light, and water, is supplied to the men, and their families, at Parramatta Barracks.

The articles of equipment prepared were:—

Plate engraved for protractors.  
Ditto ditto for graduated paper, for levelling staves.  
Levelling staves.  
Camp tables.  
Portable drawing boards.  
Boxes for levelling staves.  
Ditto for stationery.  
Ditto for medicines.  
Station staves.  
Offset ditto.

Set of pigeon holes for office.  
Triangles.  
Straight edges.  
Handles for tomahawks.  
Ditto for axes.  
Tents.  
Covers, for same.  
Brands, for marking equipment.  
Handling tools, for carpenter's shop.

When first employed in the field, and while arrangements for equipping the field parties were in progress, the Sappers were themselves employed as staff-holders, chainmen, &c., instead of hiring labourers for those purposes.  
The whole of the tracings, &c., required for the use and guidance of the Surveying parties have been prepared by the Sappers themselves.

EXPENDED



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**EXPENDED UNDER THE DIRECTION OF THE RAILWAY COMMISSIONERS.**


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**RETURN No. 1.**

Shewing sums already expended for Surveys, &c., in preparation of Railway Extension,—

To salary paid to Mr. Henry Haege, while laying out the Campbelltown extension, up to 31st August, 1856	...	...	...	...	...	...	...	...	270	16	8
Expenses contingent on the above Survey	...	...	...	...	...	...	...	...	208	13	9
Salaries of Officers employed in collecting traffic and compiling Returns, in accordance with Governor General's instructions, No. 7, 30 January, 1856, viz. :—											
Chas. T. Aldrich, Maitland; J. E. Ross, Windsor Road; Stewart M'Williams, Penrith; Francis Newdick, Pennant Hills; Edward Dufaur, Picton; and Thomas Speed, Liverpool	...	...	...	...	...	...	...	...	438	12	2
									<hr/>		
									£918 2 7		

The services of these Officers were dispensed with on 31st August, 1856.

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**RETURN No. 2.—NIL.**


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**SUMMARY.**
**EXPENDED UNDER DIRECTION OF THE SURVEYOR GENERAL—**

I. To Officers of his Department	...	...	...	...	...	...	...	9,519	14	7	
II. Detachment of Sappers and Miners	...	...	...	...	...	...	...	5,243	3	3½	
									<hr/>		
									14,762 17 10½		

EXPENDED UNDER DIRECTION OF THE RAILWAY COMMISSIONERS	...	...	...	...	...	...	...	918	2	7	
									<hr/>		
TOTAL	...	...	...	...	...	...	...	£15,681	0	5½	
									<hr/>		



1856.

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NEW SOUTH WALES.

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## RAILWAY TRAFFIC.

(BY-LAWS, RULES, &c.)

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*Ordered by the Legislative Assembly to be Printed, 25 November, 1856.*

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RETURN to an *Order* of the Honorable the Legislative Assembly, dated 31 October, 1856, for :—

“ Copy of any Rules, Regulations, Orders, or By-Laws made by  
“ the Commissioners of Railways, relating to the conduct of the  
“ Traffic to or on the Railway between Sydney and Liverpool.”

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## RAILWAY TRAFFIC.

### BY-LAWS, RULES, AND REGULATIONS, TO BE OBSERVED ON THE SYDNEY RAILWAY.

*Under Authority of Act of Council, 19 Victoria, No. 32.*

#### CONVEYANCE OF PASSENGERS ON THE RAILWAY.

1st.—No Passenger will be allowed to take his seat in or upon any of the Railway Carriages, or to travel therein upon the Railway, without having first paid his fare.

Each Passenger, on paying his fare, will be furnished with a ticket, which he is to show when required by any authorized servant of the Railway, and to deliver up, on demand, to the Guard or other servant of the Railway authorized to collect tickets.

Each Passenger not producing or delivering up his ticket, as aforesaid, will be required to pay the fare from the place whence the Train originally started, or, in default of payment thereof, shall forfeit and pay a sum not exceeding forty shillings, in addition to the fare.

2nd.—Any Person who shall travel, or attempt to travel in any of the carriages, without having previously paid his fare, and with intent to avoid payment thereof; or who, having paid his fare for a certain distance, shall knowingly and wilfully proceed in any such carriage beyond such distance without previously paying the additional fare for the additional distance, and with intent to avoid payment thereof; or who shall knowingly and wilfully refuse or neglect, on arriving at the point to which he has paid his fare, to quit such carriage; or who shall in any other way attempt to evade payment of the proper fare, is hereby subjected to a penalty not exceeding forty shillings. (Clause VII, 19 Victoria, No. 32.)

3rd.—Passengers at intermediate stations can only be booked conditionally, that is to say, in case there shall be room in the Train for which they are booked. In case there shall not be room for all the Passengers booked, those booked for the longest distance shall have the preference; and those booked for the same distance shall have priority according to the order in which they are booked.

4th.—Smoking is strictly prohibited both in and upon the carriages and in the Stations. Every person smoking in a carriage is hereby subjected to a penalty not exceeding forty shillings; and every person persisting in smoking in a carriage or station after being warned to desist, shall, in addition to incurring a penalty not exceeding forty shillings, immediately, or if travelling, at the first opportunity, be removed from the Railway premises, and forfeit his fare.

5th.—Any person who shall jump from, or leave the carriages, or get on or into, or attempt to get on or into, any of the carriages when the train is in motion; or who shall leave the carriages at any other place than the regular passenger platforms or other places appointed for Passengers to leave the carriages, shall be liable to a penalty not exceeding forty shillings for such offence.

6th.—Any person found in any of the Railway Carriages or Stations in a state of intoxication, or committing any nuisance, or otherwise wilfully interfering with the comfort of other Passengers; and any person obstructing any of the Railway Officers in the discharge of their duty, is hereby subjected to a penalty not exceeding five pounds for each offence, and, shall, in addition, immediately, or if travelling at the first opportunity, be removed from the Railway premises, and forfeit his fare.

7th.—Any person who shall wilfully cut the linings, remove or deface the number-plates, or remove or extinguish any of the lamps in the carriages, break the windows, or otherwise damage any of the Railway Carriages, is hereby subjected to a penalty not exceeding five pounds for each offence, over and above payment for the damage done.

8th.—Every person travelling on the Railway may take with him his ordinary personal luggage, not exceeding the weights following, that is to say, if travelling in a first class carriage, 100 lbs.; in a second class carriage, 60 lbs.; and in a third class carriage, 40 lbs.; without any charge being made for the carriage thereof.

9th.—No responsibility will, however, be recognized for Passengers' luggage unless it has been booked and separately paid for. On booking, a ticket will be given to the owner, and a corresponding ticket affixed to the luggage, and the luggage will be delivered only to the person producing such ticket.

10th.

10th. The porters belonging to the Railway will render every facility to Passengers for loading and unloading luggage; but no fee or gratuity of any kind is permitted to be taken by the Railway servants under any circumstances whatever.

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CARRIAGE OF GOODS ON THE RAILWAY.

1st.—Any person who shall carry upon, or send, or cause to be sent by the Railway, any Aquafortis, Oil of Vitriol, Gunpowder, or other goods or articles which, in the judgment of those having charge of the Railway, are of a dangerous nature, without distinctly marking their nature on the outside of the package containing the same, or otherwise giving notice, in writing, to the book-keeper or other servant of the Railway with whom the same are left at the time of so sending, is liable to a penalty not exceeding fifty pounds for each offence, under Clause IX, 19 Victoria, No. 32.

2nd.—All tolls or charges for goods shall be paid in advance, or on demand, and any person who shall refuse or neglect, on demand, to pay the rates, tolls, or other sums due in respect of goods, articles, or other things carried along the Railway to the Collectors or other persons appointed to receive the same, at the respective places appointed, is liable to have the said goods, articles, or other things detained until such payment shall be made, with all reasonable charges for the seizure and detention.

3rd.—No carriage or waggon shall carry at any one time upon the Railway, including the weight of such carriage, more than eight tons.

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GENERAL REGULATIONS.

Any person who shall travel or pass on the Railway (except in directly crossing the Railway by any road or footpath on the level thereof appointed for that purpose) shall be liable to a penalty not exceeding five pounds for each offence.

Any person neglecting to shut and securely fasten any gate set up across or at either side of the Railway, as soon as he and any carriage, cattle, or animals under his charge have passed through the same, is liable to a penalty not exceeding five pounds for each offence.

Any person wilfully or maliciously destroying or injuring any part of the Railway or works, shall be, over and above the amount of damage done, liable in a penalty not exceeding ten pounds for each offence.

Persons wilfully obstructing any engine or carriage, or endangering the safety of persons in or upon the same, are liable, under Clause XVII, 19 Vict., No 32, to ten years imprisonment with or without hard labor.

Any person wilfully defacing or destroying, or who shall aid or assist in defacing or destroying any board or milestone, post or mark, set up to denote distances on the Railway, or obliterating any of the letters or figures thereon, is liable in a penalty not exceeding five pounds for each offence, besides the expense of restoring such boards, stones, posts, or marks.

Any person found on any part of the Railway, or within any part of the stations, warehouses, or premises in a state of drunkenness, shall be liable in a penalty not exceeding five pounds sterling for each offence.

Any person found selling, or offering for sale, any article whatever, upon the Railway or at any of the stations, without having received special permission from the Commissioners or their authorized agents, shall be liable to a penalty not exceeding forty shillings for each offence.

The drivers and conductors of all public coaches, omnibuses, or other carriages that may be admitted into the Railway premises, shall conform to the regulations to be from time to time made by the Commissioners, and every driver or other person acting contrary thereto, shall forfeit and pay a sum not exceeding five pounds for each offence.

The Seal of the Commissioners for Railways was affixed hereto by

GOTHER K. MANN, Chief Commissioner.  
 THOMAS BARKER, }  
 CHARLES KEMP, } Commissioners. (L. S.)

In the presence of CHARLES J. NEALDS, Secretary.

10 January, 1856.



## RAILWAY TRAFFIC.

5

SEASON TICKET FARES.					
Dis.	JOURNEY.	1st Class.	2nd Class.	3rd Class.	
Miles.	Time—One Month.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
2	SYDNEY to NEWTOWN ...	0 16 8	0 12 6	0 8 6	
5	" " ASHFIELD ...	2 2 0	1 11 6	1 1 0	
6 $\frac{1}{2}$	" " BURWOOD ...	2 14 6	2 1 0	1 7 6	
7 $\frac{3}{4}$	" " HOMEBUSH ...	3 5 0	2 8 6	1 12 6	
13 $\frac{1}{2}$	" " PARRAMATTA ...	5 12 6	4 5 0	2 16 6	
17 $\frac{3}{4}$	" " FAIRFIELD ...	7 8 0	5 11 0	3 14 0	
22	" " LIVERPOOL ...	9 3 6	6 17 6	4 12 0	
<b>Time—Three Months.</b>					
2	SYDNEY to NEWTOWN ...	2 5 0	1 14 0	1 2 6	
5	" " ASHFIELD ...	5 12 6	4 4 6	2 16 6	
6 $\frac{1}{2}$	" " BURWOOD ...	7 6 6	5 10 0	3 13 6	
7 $\frac{3}{4}$	" " HOMEBUSH ...	8 15 0	6 11 0	4 7 6	
13 $\frac{1}{2}$	" " PARRAMATTA ...	15 4 0	11 8 0	7 12 0	
17 $\frac{3}{4}$	" " FAIRFIELD ...	20 0 0	15 0 0	10 0 0	
22	" " LIVERPOOL ...	24 15 0	18 11 6	12 7 6	
<b>Time—Six Months.</b>					
2	SYDNEY to NEWTOWN ...	4 0 0	3 0 0	2 0 0	
5	" " ASHFIELD ...	10 0 0	7 10 0	5 0 0	
6 $\frac{1}{2}$	" " BURWOOD ...	13 0 0	9 15 0	6 10 0	
7 $\frac{3}{4}$	" " HOMEBUSH ...	15 10 0	11 12 6	7 15 0	
13 $\frac{1}{2}$	" " PARRAMATTA ...	27 0 0	20 5 0	13 10 0	
17 $\frac{3}{4}$	" " FAIRFIELD ...	35 10 0	26 12 6	17 15 0	
22	" " LIVERPOOL ...	44 0 0	33 0 0	22 0 0	
<b>Time—Twelve Months.</b>					
2	SYDNEY to NEWTOWN ...	6 0 0	4 10 0	3 0 0	
5	" " ASHFIELD ...	15 0 0	11 5 0	7 10 0	
6 $\frac{1}{2}$	" " BURWOOD ...	19 10 0	14 12 6	9 15 0	
7 $\frac{3}{4}$	" " HOMEBUSH ...	23 5 0	17 9 0	11 12 6	
13 $\frac{1}{2}$	" " PARRAMATTA ...	40 10 0	30 7 6	20 5 0	
17 $\frac{3}{4}$	" " FAIRFIELD ...	53 5 0	40 0 0	26 12 6	
22	" " LIVERPOOL ...	66 0 0	49 10 0	33 0 0	

**RULES AND REGULATIONS TO BE OBSERVED BY OFFICERS AND MEN  
EMPLOYED ON THE SYDNEY RAILWAY.**

*September, 1855.*

Every engineman, fireman, guard, gatekeeper, pointsman, policeman, and platelayer is required on entering the service of the Railway, to subscribe to an agreement to obey the following Rules and Regulations, as also to comply with the orders of his superior officers, and shall keep a copy of these Regulations (with a Time Table) constantly on his person while on duty; and shall produce them when required to do so. Every servant of the Railway shall make himself conversant with *all* the following Regulations, and shall frequently read those specially affecting the department to which he is attached.

Any person neglecting to comply with these Rules and Regulations will be immediately punished by *dismissal*.

**SIGNALS.**

I. Red is a signal to stop. Green, to go slowly. White, to go on.  
In addition to the regular signals, it is to be distinctly understood that *any flag, lamp, or other object waved up and down*, by a person on the Line, is a signal to stop the Train. Any lamp, flag, or other object waved to and fro, is a signal to go slowly.

**DISTANCE SIGNALS.**

II. The signal posts are furnished with cross boards, painted red and white, and with lamps, shewing red, green, and white lights.

1. If a coming Engine or Train is not required to stop at a station, the white board *by day*, and the white light *by night*, shall be turned on.

2. Whenever the cross board stands up and down the Line, or edgways, as seen by an approaching Engine Driver, it is a signal to proceed *slowly into the station, and stop at the platform.*

*By night*, the green light will be turned on for the same purpose.

3. The danger signal, always to stop, is shewn by the red board standing across the Line *by day*, and by the red light at night, when the Engine or Train shall never upon any account, pass beyond the signal post.

4. Enginemens must invariably sound the whistle on coming in sight of the signal of each station.

#### SEMAPHORE SIGNALS.

##### *By day.*

III. These signal posts are furnished with two arms, one moving out on one side, to give signals to Trains on the Down Line of Rails, and the other moving out on the other side of the signal post, to give signals to Trains on the Up Line of Rails.

1. The signal all right, is shewn by the left hand side of the signal post, as seen by an approaching Engine Driver, being clear, thus.

2. The caution signal, to slacken speed, is shewn by the arm on the left hand side being raised half way to the horizontal position, thus.

3. The danger signal, always to stop, is shewn by the arm on the left hand side being raised to the horizontal position, thus.



4. The position of the arm on the right hand side, has reference to the right hand Line, and is consequently a signal to Trains running in the contrary direction.

##### *By night.*

5. The signals will be made by red, green, and white lights.

IV. One red tail lamp shall be hung behind every Train, or Engine without a Train, when used upon the Main Line at night, or during fog; the Guard of the Train, or the Engineman, if the Engine be without a Train, to be responsible for the same.

V. A red board or flag *by day*, or an extra tail lamp *by night*, or in foggy weather, hung at the back of an Engine or Train, denotes that an extra Train is to follow.

VI. In approaching junctions, every Engineman shall sound the whistle, to give the Pointsman notice of his approach, and shall stop his Train before coming to the points and crossings, unless the proper signal, caution, be exhibited.

In clear weather, neither Engine nor Train shall approach or pass any junction at a greater speed than ten miles an hour.

In foggy weather, neither Engine nor Train shall approach any junction at a greater speed than that at which it can be stopped before arriving at the points and crossings, should a signal to stop be exhibited.

Every Engineman, Fireman, and Guard, must keep a strict look-out when approaching a junction.

VII. Whenever, and wherever a signal to stop is made by a Policeman, Gatekeeper, Platelayer, or any other person on the Line, the Engineman shall bring his Engine to a complete stand, whether or not he comprehends the reason for the signal being made.

Any Engineman or other person disobeying or not observing signals, is always to be reported by the person making the signal, such report to be made in writing, and sent to the Office of the Manager.

#### INSTRUCTIONS TO ENGINEMEN.

I. The Engineman shall be on duty half an hour before the time appointed for starting with the Train, to see that his Engine is in proper working order; sufficiently supplied with fuel and water; and that the necessary tools for repairs are in their proper places.

II. Every Engineman shall have at all times, in his tender, the following tools, viz.: a complete set of screw keys, one large, and one small monkey wrench, three cold chisels and a hand hammer, two half-round files, one crow-bar, a screw jack, two short coupling chains with hooks, two coupling links, spare pins and cotters, large and small plugs for tubes, oil cans, some flax, gaskin and string, two fire buckets, a bright red flag, a signal lamp, and a tail rope.

The Engineman will be held responsible for having the above tools in working order, and in the event of any of them being lost, he shall immediately get the same replaced.

III. The Engineman having assured himself, by a careful examination, that his Engine, lamps, and tools, are all in good order, must cross over to the departure Line, in front



front of the Train, *ten* minutes before the time of starting. Great caution must be used in placing the Engine against the Train, which should be done without moving a single carriage, in order to guard against injury to any passenger who may be in the act of stepping into a carriage at that moment.

While the Engine is standing, whether before starting or at a station, or on the Line, for however short a time, the slides must always be thrown out of gear, and the tender brake screwed tight on, until the signal be given for starting.

IV. Enginemen shall *afford every assistance* with their Engines that may be required for the arrangement and despatch of the Trains, and shall follow the *directions of the Guards* in working the Trains.

V. Except the proper Engineman and Fireman, no person shall be permitted to *ride on the Engine or Tender*, without the special license in *writing*, of the Manager.

VI. Guards will give the Enginemen a signal to start the Trains by blowing a whistle. Every Engineman, on receiving the signal from the Guard to start, *must sound his whistle* before turning on the steam.

VII. Enginemen are strictly enjoined to start all Trains *slowly*, to prevent the jerking of carriages, or breaking of draw chains, and not to shut off the steam too suddenly, so as to cause a concussion of carriages or waggons, to the risk of passengers; and in cattle Trains, to the injury of the animals.

VIII. Enginemen must pass along the proper line of road, which is the *left hand side* of the permanent way.

IX. Upon the main line, no Engine shall run with the *Tender foremost*, except under special circumstances.

X. No Engine shall be allowed to *push* a Train of carriages or waggons, but shall *draw* the same, unless in cases of shunting, or when required to start a Train from a station for a short distance only; or in case of any Engine being disabled on the road, then the succeeding Engine may *propel* the Train *slowly* as far the *next shunt or turn out*, at which place the said propelling Engine shall *take the lead*.

XI. Every Engineman shall *stand up* and keep a *good look out all the time the Engine is in motion*, and likewise the Fireman, except when his duties cause him to be otherwise engaged upon the Engine or Tender.—The Fireman shall frequently look back for any signals which the Guard may make, and communicate the same to the Engineman.—Enginemen shall regulate the working of the Engines *as accurately as practicable* according to the Time Table, so as to avoid *extreme speed*. They shall *approach* all stations *carefully*, and not *overrun* the platform where they have to *stop*; and they shall use particular *caution* in *passing* stations where they have not to stop; and should a passenger Train be *standing* at a station, it shall *not* be passed at a greater speed than *eight miles an hour*; the approaching Enginemen making constant use of the whistle.—Enginemen are on no account to make up time, by increased speed, without special instructions from the Manager.

XII. No Engine nor Train of any sort shall stop on the road, nor at any but the *appointed* stations, except only when a *signal* is given, or in case of *accident* to any part of the Engine or Train, or when, in the judgment of the Engineman, it is necessary to prevent accident or collision.

XIII. Engines running alone or with empty carriages or waggons, shall *not* exceed a speed of *twenty-five miles an hour*, without distinct orders (in writing) in each case, or from urgent necessity; nor shall they pass any station where there is a siding, at a greater speed than *ten miles an hour*.

XIV. When Engines are working together, the second Engineman must watch for and take signals from the leading Engineman; but, should the second Engineman perceive any thing wrong with the Train, he must sound the whistle, that the Engines may check and stop together. Neither Pilot nor any other Engine, to be detached nor shunted in front of a Train, without the Train being previously stopped.

XV. Enginemen and Firemen are strictly prohibited throwing small coke on the road.

XVI. No Engineman shall, under any circumstances, *leave his Engine or Train, nor any part of his Train* on the line, without placing a *man in charge* of the same, and if on the *main line*, he must send a man with a signal *half a mile* behind the last vehicle, to prevent other Engines running against it.

XVII. All Engines travelling on the same line, shall keep at least half a mile apart from each other, that is to say, the Engine which *follows*, shall not approach within half a mile of the Engine which *goes before*; and in coming down any incline, the Engine *following* shall not come within three quarters of a mile of the Train which *precedes* it.

XVIII. In the event of the road being obscured by steam or smoke, any approaching Engine shall not pass through the steam or smoke, but shall stop at a sufficient distance to prevent collision, and the Engineman shall ascertain that the way is clear and safe, *before attempting* to proceed.—If any Engineman perceive a Train stopped or stopping from accident or other cause, on the opposite line, he must immediately *slacken speed*, so that he may pass such Train *slowly* or *stop* altogether before reaching it, if necessary.

XIX. If from any special cause the Engineman requires the *brakes to be used*, he shall give *two short sharp whistles*; and if the Guard should require to *stop* the Engine, the signal from him shall be a *red flag or a red light*.

XX. A goods, mineral, or ballast Train, when *likely to be overtaken* by a passenger Train, shall *shunt* at least fifteen minutes before the Passenger Train is due, and *wait there till five minutes after the Passenger Train has passed*; and *before shunting*, care must be taken that *signals are made* in one or both directions, as the case may require.—Wherever there is a siding of sufficient length to contain the Train, it shall *not be shunted* from one main line to the other, but shall be *placed in the siding*.

XXI.

XXI. When an Engine or Train is stopped from any cause on the main line (except at stations,) the Guard, or in his absence the Fireman, or some other competent person, shall immediately go half a mile back with a red signal to stop any coming Train.—When from any cause a Train is unable to proceed at a greater speed than four miles an hour, the Guard or Fireman shall be sent back half a mile, and continue walking at that distance behind his Train, with his danger signal shewn, so as to stop any following Train, until assistance arrives, or the Train is shunted.

XXII. In the event of accident blocking one Line of Rails, and requiring all the Trains to pass over the other Line of Rails, the utmost caution must be exercised, and no Train shall be permitted to proceed on the wrong Line without a memorandum in writing from a person in authority on the spot or nearest station where the accident has occurred.

So liable are verbal messages to misinterpretation, that should a verbal message be received, to send a Train forward on the wrong Line, the messenger must be sent back for a written memorandum before the Train is allowed to move.

XXIII. In case of accident, or when the passage of a Train is obstructed, or when an Engine shall be obliged to move in the wrong direction on either Line, the Engineman shall send his fireman or some other competent person with a signal half a mile, before the Engine moves, to stop any Engine coming on the same Line in the opposite direction; and whilst moving, the Engineman shall make frequent use of the whistle, and shall run at a speed not exceeding four miles an hour, so as to enable the person sent in advance, to keep half a mile before the Engine. Enginemen shall not run on the wrong Line, on any pretence, farther than to the nearest shunt, when the Engine shall pass on to the proper Line.

XXIV. Whenever part of a Train is left on the Line from accident, or from inability of the Engine to bring on the whole, the Engineman shall not return for it on the same Line, except by special instructions from the Guard, but shall go on to the proper Line, and cross at the nearest points to the part left.

XXV. Enginemen and Guards must immediately report any defect in the works, also any delay or unusual circumstances that may have taken place on the journey, to the proper authorities at the next Station, and also at the Terminus.

#### INSTRUCTIONS TO GUARDS.

I. No Guard who is to proceed with a Train, or who is on Station duty, must appear at the Station without the Railway Uniform.

II. The Guard of every Train must be in attendance half an hour before the time of starting.

III. The Guard shall see that he has his signals, flags, and hand signal lamp, on every Train.

IV. He will receive his instructions from the Superintendent, to whom he is to make known whatever is wanting, and by whom he shall be directed when to start the Train.

V. The Train will be under his control, the Passengers and their property under his charge, and he will be responsible for the safety and regularity of the whole; he must take care, previously to starting, that there are a sufficient number of carriages attached to the Train; that they are properly coupled; that an adequate number of covers for luggage are provided, and that the Signal and roof lamps are attached.

VI. He must keep the time of running, and be answerable that every carriage or waggon which is to be left at an intermediate Station is detached. He must take care that if a carriage or waggon be attached to, or detached from a Train on any part of the Road, the requisite change be made so that the signal lamps may always be in the rear of the last carriage or waggon.

VII. The doors of the carriages on the off side, are always to be locked, and in case of any stoppage on the road, Guards are charged to request Passengers to keep their seats except when necessary to alight.

Passengers are not allowed to ride on the outside or top of carriages.

VIII. When the train is in motion the Guards shall keep a good look out, and note any irregularity in the running, any particular oscillation of a carriage or waggon, or any signal made by a Passenger; and be at all times prepared to communicate with the Fireman, which they must do by motions with a red flag or lamp, or if absolutely indispensable, by getting to the Engine; and they are desired to look back at Gatemen, Policemen and Platelayers, to see if they observe anything wrong in the passing Trains.

Guards shall examine the carriage covers to see that no fire lodges while travelling.

Any carriage or waggon in a Train, which may appear to be unsafe to travel with that Train, shall be left at the first convenient station or siding.

IX. Guards with Goods Trains are ordered to refuse to take up waggons containing goods of a nature to take fire by a spark or hot cinder, unless such goods are completely sheeted. Before starting their Trains, Guards shall assure themselves that the waggons are greased, and are in a safe and fit state for the road. They shall constantly keep a good look-out, especially as to fire and the loading of the waggons.

X. Guards are forbidden to pass over the tops of the carriages when in motion, without the most urgent necessity.

XI. In case of any sudden emergency, the Enginemen will give two short sharp whistles, when Guards must immediately apply the brakes, and do all they can to stop the Train.

XII. When a passenger or luggage Train comes to a stand on the Main Line, or is only enabled to proceed at a very slow pace, the Head-Guard is to send back notice by the Under-Guard to the nearest Policeman or Ganger of platelayers, if within distance for prompt communication;

communication; but if too far, then the Under-Guard shall remain not less than half a mile in rear of the Train, shewing his red signal, until recalled.

Should the Train have only one Guard, he will perform this duty.

XIII. On the arrival of a Train at a Terminus, the Guards are not to leave the platform until they have delivered over all *parcels*, as well as *luggage*, to the porters appointed to take charge of them, and if any article is missing they are immediately to report the same to the Officer in charge of the Station.

#### INSTRUCTIONS TO STATION MASTERS.

I. On the *passing* or *arrival* of every Train at a Station, the *Red* or *Danger Signal* shall be turned on in the direction from which the Train has come, and shall remain so for *five minutes* after the passing or departure of the Train, for the purpose of *stopping* any following Train: after which time the *caution signal* shall be exhibited, and shall remain until necessary to shew the red or white signal.

II. Neither engine, carriage, nor waggon is to *cross* or *shunt* on the *Main Line*, without the *proper signal* being *previously exhibited*.

III. Neither Engine nor Train shall be allowed to *leave* or *pass* a station within less than *five minutes* after another Train on the *same Line*.

IV. The Station Master shall direct the Guard when to *start* the Trains, and he shall use every exertion to *ensure punctuality*.

No Train is to leave any station *before* the time stated in the Time Tables.

V. Waggons and carriages are never to be allowed to *stand* on the *Main Line* at a station, but must be placed in a siding; and no part of the carriage or waggon shall be allowed to stand within *six feet* of the *Main Line*; and at night the wheels must be chained and locked, or *securely scotched*.

VI. Station Masters must examine the action of their signals, both by day and night, and immediately report any defect that they may observe at the Office of the Manager.

VII. No Station Master is allowed to *absent* himself from the duties of his Office unless with *leave from the Manager*, except from illness, in which case he must immediately inform the Manager, and in the mean time he must take care that some *competent person* is entrusted with his duties.

VIII. Station Masters will be held responsible for all the points at or near their respective stations being in proper working order; for which purpose the Pointsman shall clean and oil the points and the open chairs upon which they slide, at least once every day.

If from any cause the points should not act freely, the Station Master must immediately report the same in writing at the Office of the Manager.

#### INSTRUCTIONS TO GATEMEN AT LEVEL CROSSINGS.

I. Each Gateman will be provided with *day* and *night signals*, which he must keep in proper order, and *always* in readiness for use.

II. The gates to be always *kept shut* across the road, except when *required to be opened* to allow the Railway to be crossed.

III. Whenever the Railway is *required to be crossed*, the Gateman shall, before opening his gate, satisfy himself that the Train is *not* in sight; he shall then shew his red signal (to stop the Train), and in all cases allow the signal to *remain* until the Railway is *properly clear*; he must then close the gates, and alter the signal.

IV. On all occasions, when signalling, the Gatemen are to stand on the opposite side of the Railway to that on which the Train is passing, that they may be seen by the Driver of the Train.

#### INSTRUCTIONS TO PLATELAYERS.

In every gang of Platelayers or Laborers there shall be a Ganger or Foreman, and the Contractor for the maintenance of way shall take care that every such Ganger or Foreman shall be provided with a copy of these Regulations, and with the proper signal flags and lamps as herein required, and with accurate gauges for gauging the Line.

II. The Contractor will be held responsible for having these Regulations duly attended to by every person employed by him.

III. Every Ganger or Foreman shall constantly keep a copy of these Regulations on his person while on duty—and he must read and explain them to every man engaged under him—and must produce them when required to do so.

IV. Each Platelayer will be held responsible for keeping his portion of the Line clear and safe, and shall see that all gates are kept shut, and the fences safe, and that no *sheep*, cattle or other animal stray within the fences, or upon the Railway.

V. Platelayers shall walk over their respective lengths every morning and evening, and see that all keys and other fastenings are tightened up, and they shall pay particular attention to the joint chairs, and keep the joint of the Rails in the centre of the chairs, and the two ends of the Rails perfectly level.

VI. The signals to be made use of by Platelayers are two, viz.—one green and the other red.

Every gang of platelayers or laborers shall have one or more sets of red and green signal flags to be used during day light, and one or more sets of red and green signal lamps

to be used after night fall, or during fogs. The green signal is to indicate caution, and is to be used when necessary to slacken the speed of a Train. The red signal is to indicate danger, and is to be used when necessary to stop a Train.

*The red signal must not on any account be used except in cases of danger, and where it is considered necessary that a Train should be stopped.*

VII. Previous to any rail being taken up, or any truck, lorry, waggon, or other impediment being placed on the Line; or in the event of any Ballast Train, or other Train being obliged to remain on the Main Line, or to move slowly, so as to be in danger of being overtaken; or in case of any slip or failure of the works; or if from any other cause the Line is not safe, the red signal shall be conspicuously exhibited in the direction of a coming Train, (even if no Engine is expected,) at a distance of one half mile from the point where such impediment or danger exists, by a man appointed to the duty, who shall continue to exhibit the signal until a messenger arrives with express orders to withdraw the signal, but which orders shall not be sent till the impediment is completely removed.

VIII. When, in repairing a road, it becomes necessary for a Train to proceed cautiously, a man is to go a quarter of a mile from the place under repair to meet the Train, and exhibit the green signal so as to be plainly visible to the driver of the approaching Train.

IX. A red board or flag, or an extra tail lamp hung behind an Engine or Train, denotes that an extra Engine is to follow.

X. If a passenger Train approach within ten minutes of a coal, goods, mineral or ballast Train, the platelayers shall exhibit the caution signal. All signals to be held in the hand, and not stuck into the ground.

XI. When necessary to use ballast Trains at night, or during a fog, a powerful red signal lamp must be attached to the tail of the Train; but no ballast Train, waggon, truck or lorry shall be used, nor shall any rail be displaced, if it be possible to avoid it, unless it be by daylight, and the weather sufficiently clear for a signal to be distinctly seen at a distance of half a mile.

XII. When a lorry or truck is used for conveying materials or men along the line, it must be taken in the same direction as the Trains, and must be followed at a distance of half a mile by a man with a red signal.

XIII. No lorry, truck, waggon, ballast Train, nor other impediment must be allowed to be on any part of the line within fifteen minutes of a Train being due; and except in cases of accident or absolute necessity, all repairs must be effected and the line made clear and safe for the passage of Trains, fifteen minutes before Train time. No lorry is, under any circumstances, to be attached to the end of a Train.

XIV. In raising the permanent way, no lift shall be greater than three inches at once, and then it shall be effected in such a manner as not to occasion any sudden change of gradient. Both rails shall be raised equally and at the same time, and the ascent shall be made in the direction in which the Trains run. Platelayers are cautioned not to have more than one length of rails opened on the outside during the passage of Trains.

XV. On every occasion when lifting is done, a man must be stationed at a distance of a quarter of a mile from the place, with a green signal, to slacken the speed of any coming Trains.

XVI. All broken chairs, rails, sleepers, or other defective materials shall be removed from the road with the least possible delay, and sound materials substituted. In case of a broken joint chair, or of any other defect of a dangerous nature, a new chair must be immediately introduced; or the defect, whatever it is, must be immediately remedied: and the red signal must be exhibited at the proper distance, so long as any danger exists.

XVII. No ballast shall be thrown up to a higher level between the rails than three inches, and shall be thrown as much as possible on the outside of each line and between the two lines, and the rails must be kept clear of gravel, ballast, and other materials.

XVIII. Platelayers engaged in repairing the road must get out of the way when a Train is approaching, so as to prevent the Engineman being in any doubt as to the line being clear.

XIX. Platelayers must report to the Inspector of permanent way every case in which any of the signals are disregarded by the Engine Drivers.

XX. Each man shall every night remove all his work tools, barrows, and planks to some safe and convenient place, clear of the line.

XXI. Platelayers will be held responsible for keeping all points, switches, levers, &c., in their respective lengths, well cleaned and oiled, and in perfect working order.

No siding or switches of any kind shall be laid down without express orders, in writing, from the Engineer.

No temporary switches shall be used excepting of such construction as shall be approved by the Engineer.

No siding is to be nearer than six feet to the nearest Rail.

XXII. No waggon of any description shall stand in any siding without having an approved scotch before one or both wheels of the waggon nearest to the entrance into the Main Line; and in the night time, or when not in actual use, one or both of the end wheels shall be fastened to the Rails by a chain and padlock.

XXIII. Any luggage, goods, or articles of any kind falling off the Trains, are to be conveyed without delay to the nearest Station Master.

XXIV. Any accident to an Engine or Train, or any failure of any part of the works, is to be immediately reported by Special Messengers to the Manager, and to the nearest Station Master on each side of the point at which the accident occurs; and signals of stoppage must be exhibited at the distance of half a mile from the point of accident, by men stationed there for the purpose.

XXV.

## RAILWAY TRAFFIC.

11

XXV. Every Ganger is required to order off all persons *trespassing* within the Fences, and if such persons persist in remaining, he is to take them to the nearest Station, and give them into the charge of the Station Master or the Police.

By order of the Commissioners for Railways,

CHARLES J. NEALDS,

Secretary.

Sydney, 11 September, 1855.

I, \_\_\_\_\_ being this \_\_\_\_\_ day of  
 18\_\_\_\_, engaged as \_\_\_\_\_ in the service of the Sydney Railway, do  
 hereby bind myself to observe and obey the foregoing Rules and Regulations, which I have  
 read, or heard read, and understand; and also all others that may from time to time be issued  
 for the better government of the Railway, so long as I remain in its service.

Signature \_\_\_\_\_



1856.

## NEW SOUTH WALES.

## RAILWAYS.

(REPORT FROM COMMISSIONERS OF SYDNEY, AND HUNTER RIVER RAILWAYS.)

*Ordered, by the Legislative Assembly, to be Printed, 3 June, 1856.**Railway Office,  
Sydney, 19th February, 1856.*

SIR,

1. In accordance with the provisions of the 12th clause of the Government Railway Act, the Commissioners for Railways do themselves the honor to transmit a Balance Sheet, duly audited, of the Receipts and Expenditure of the Commission, during the year ended 31st December, 1855.

2. In attention to your letter, No. 59-9, of 9th instant, the Commissioners also submit, for the information of His Excellency the Governor General, a statement of their proceedings in continuation of their Report of the 2nd July last.

3. On the 3rd of August the Commissioners reported upon the state of the Surveys for the extension of the Line to Liverpool, and were instructed to call for tenders for the execution of the work. It was necessary, however, before this could be done, to revise the plans and specifications, which had been prepared for single way works, His Excellency considering it advisable to construct double way works, though in the first place only to lay down a single line of permanent way.

4. On the 19th October, advertisements were inserted in the *Government Gazette* and two daily papers, inviting tenders for the construction of the Line, to be delivered before 12 o'clock on 1st November.

5. But one tender was received in reply to this advertisement; this was from Mr. Randle, and amounted to £76,119 16s., being at the rate of £9,308 per mile, for a Line in accordance with the revised specification, but exclusive of the cost of building the stations. This tender was finally accepted on the 8th November, as detailed in the Chief Commissioner's letter of the 24th November last; and on the 31st December the progress of the work was as per statement in margin.

6. On the 18th July the Commissioners received from the Colonial Treasurer the Government Debentures to be paid to the proprietors of the Hunter River Railway Company, and on the 30th the deed transferring that property to the Government, was formally executed and handed over to the Commissioners by the Deputy Chairman of the Company.

7. The Commissioners, on the 14th August, finally accepted the tender of Mr. Wright for the extension of the Line from Hexham to East Maitland, as referred to in the 6th paragraph of their Report of 2nd July, and on the 21st the contract for the performance of this work was duly signed by Mr. Wright, the total amount being £76,240, or at the rate of about £10,000 per mile, exclusive of station buildings. The Commissioners have much satisfaction in informing His Excellency that these works are progressing rapidly, as shewn in the margin, and they confidently expect that the Line will be completed well within the specified time, viz., the 1st October, 1856.

8. The Commissioners, on 17th August, transmitted to Messrs. Flower & Co., an indent for Rolling Stock, as per margin, estimated to amount to £22,000, principally for the service of this Line.

7,220 c. yds. cutting,  
13,730 c. yds. side cutting,  
93 acres cleared, 330 rods  
fencing, 100 c. yds. exca-  
vation at dam, also cul-  
verts in brick to the  
amount of £368 4s.

103 acres cleared, 65,680  
c. yds. cutting, 25,093  
c. yds. side cutting, 2,430  
rods fencing, 796 c. yds.  
ditching and £2,703 worth  
of brick work in culverts  
completed to 31st Decem-  
ber.

3 Locomotives with ten-  
ders, 34 carriages, 10 zinc  
covered good trucks, 20  
open high sided trucks,  
3 passenger luggage vans,  
20 low sided trucks, 2 36  
foot turn tables, 10 14 feet  
turn tables, 4 sets 3 throw  
joints and crossings 30  
sets single joints and  
crossings, 50 springs and  
axles.

9. On the 31st August the Colonial Treasurer delivered to the Commissioners the Debentures payable by the Government for the Sydney Railway Stock, and on the 3rd September, the President of that Company made a formal transfer of their property to the Commissioners.

10. An arrangement having been entered into with Mr. Randle for the working of the Sydney and Parramatta Railway, whereby he undertook to keep the permanent way and rolling stock in repair for twelve months, and to pay all expenses, excepting the salaries of the principal, and half the salaries of the intermediate station masters, also, some minor expenses, on condition of his receiving 55 per centum of the gross proceeds. The Commissioners opened the Line to the public on the 26th September, and they have pleasure in reporting that Mr. Randle has hitherto satisfactorily carried out his agreement. The gross proceeds up to the 31st of December amount to £9,248 10s. 3d., the total number of passengers 98,846, or at the rate of above 30,000 persons per month travelling by rail.

11. The Commissioners would however remark, that the Line cannot yet be considered in full operation, the arrangements for goods traffic being incomplete, and three and a half miles of the second line, authorized by your letter of the 26th October, requiring still to be permanently laid.

12. The Commissioners nevertheless take pleasure in drawing the attention of His Excellency to the favorable result of this very partial introduction of Railway Transit, the net balance deposited in the Colonial Treasury being equivalent to  $2\frac{3}{4}$  per cent. upon an outlay of £500,000.

13. The Commissioners propose issuing season tickets, which they consider, by offering a ready and economical means of conveyance between the several stations and the City, will ultimately be the means of materially adding to the passenger traffic.

14. The Fitz Roy Iron and Coal Mining Company have intimated that they would shortly be able to supply to order iron rails at a reasonable rate, but their works do not appear at present to be sufficiently advanced to enable the Commissioners to enter into any definite arrangements with that Company.

15. Finding from the multiplicity of land claims at present requiring immediate settlement, and the large amount of business accruing from this source alone, that the existing system would shortly involve the Government in a very considerable expenditure, the Commissioners, on the 15th November, entered into an agreement with Messrs. Norton, Son, and Barker, for three years, to transact the legal business of the Commission, for the fixed annual sum of £800.

16. On the receipt of your letter No. 106-55, the Commissioners immediately placed themselves in communication with the Surveyor General, and requested that officer to proceed with the following surveys, viz. :—

From Parramatta to Penrith *via* Pennant Hills.

Continuation of Southern Line from Campbelltown to Menangle.

Continuation of the Hunter River Line to Singleton.

From a navigable point on the Brisbane to the Downs, including the Survey of the country between Ipswich and Brisbane.

The Commissioners have the assurance of the Surveyor General that these Surveys will be proceeded with without delay.

17. The Commissioners have also placed themselves in communication with Mr. McGowan, and they will lay before His Excellency the measures they propose for the establishment of Electric Telegraph along the lines of Railway in the Colony.

18. The Commissioners are desirous also of reporting to His Excellency, that as the state of the Survey from Liverpool to Campbelltown will admit of that line being immediately marked out, they have directed the immediate attention of their Engineer to this extension, in order that they may be in possession of the necessary information for the completion of the plans and specifications on the receipt of instructions from His Excellency.

I have, &c.,

(Signed) GOTHER K. MANN,  
Chief Commissioner.

THE HONORABLE  
THE COLONIAL SECRETARY.



BALANCE SHEET of REVENUE ACCOUNT from 26th September, to 31st December, 1855, inclusive.

1855.	EXPENDITURE.	£ s. d.	1855.	RECEIPTS.	£ s. d.
December 31 ...	To Paid Wm. Randle 55 per cent. on £9,248 10s. 3d., amount of Total Receipts to date, as per contra. ...	5,086 13 7	December 31 ...	By total amount received from 98,846½ passengers who have travelled on the line from 26th September last to this date ... ..	9,091 6 7
	„ Paid Half Salaries of four intermediate Station Masters, from 26th September to this date, at 25s. per week, each ... ..	06 8 8		„ Total amount received for goods and parcels from 26th September to this date ... ..	157 3 8
	„ Paid Omnibus hire at Sydney Terminus from 27th September to 31st October, inclusive, being 35 days at £4 per day ... ..	140 0 0			
	„ Salaries ... ..	330 5 6			
	„ Printing ... ..	291 3 3			
	„ Stationery ... ..	16 2 0			
	„ Incidental Expenses ... ..	28 0 10			
	„ Balance Paid Colonial Treasurer ... ..	3,289 16 5			
		£ 9,248 10 3			9,248 10 3

SYDNEY AND HUNTER RIVER RAILWAYS:

Examined and Audited } (Signed) { GEORGE KING, } Auditors.  
and found correct. } ARCHIBALD CAMPBELL, }

(Signed) CHARLES J. NEALDS,  
Secretary.

BALANCE SHEET of GENERAL ACCOUNT for Year ending 31st December, 1855.

1855.	EXPENDITURE.	£	s.	d.	1855.	RECEIPTS.	£	s.	d.	
December 31 ...	To Cash paid Shareholders, Hunter River Railway Company ... ..	2,053	17	0	December 31 ...	By Cash received from Colonial Treasury ... ..	237,053	17	0	
	„ Advance for Compensation ... ..	100	0	0		„ Balance due to Commercial Bank ... ..	6,817	2	7	
	„ Exchange on Remittances ... ..	850	0	0						
	„ Interest on Bank Overdrafts... ..	142	3	0						
	„ Remitted Flower and Co., for Rails, Rolling Stock, &c. ... ..	50,000	0	0						
	„ Freight ... ..	2,751	3	11						
	„ Immigrants Passage Money ... ..	632	0	0						
	„ Furniture Account ... ..	82	14	0						
	„ Overdraft to Hunter River Railway Company	12,898	15	2						
	„ General Expenditure Account ... ..	760	10	1						
	„ Norton, Son, and Barker ... ..	267	18	4						
	„ Wm. Randle (Sydney Railway Works) ...	26,377	4	0						
	„ Do. (Liverpool Extension)... ..	4,568	0	0						
	„ Wm. Wright (Hunter River Railway Works)	70,100	0	0						
	„ Rent Account ... ..	75	0	0						
	„ Salaries ... ..	2,561	2	11						
	„ Sydney Railway Company on account of Works	69,561	15	2						
	„ Stationery ... ..	88	16	0						
		£	243,870	19	7		£	243,870	19	7

Examined and Audited } (Signed) { GEORGE KING,  
and found correct. } ARCHIBALD CAMPBELL, } Auditors

(Signed) CHARLES J. NEALDS,  
Secretary.

1857.

NEW SOUTH WALES.

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# RAILWAYS.

(REPORT OF CHIEF COMMISSIONER.)

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*Ordered by the Legislative Assembly to be Printed, 13 March, 1857.*

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THE CHIEF COMMISSIONER OF RAILWAYS to THE HONORABLE THE SECRETARY FOR LANDS  
AND PUBLIC WORKS, *transmitting Report for 1856.*

*Railway Office, Sydney,  
25 February, 1857.*

SIR,

I do myself the honor to forward, for the information of the Government, Capital and Revenue Balance Sheets, duly audited, of the Receipts and Expenditure of the Commissioners during the year ending 31st December, 1856.

2. I also submit a Report of the Proceedings of the Commissioners during the same period.

3. The extension to Liverpool, the contract for which was accepted on the 8th November, 1855, was opened to public traffic on the 26th September, and has continued in uninterrupted operation ever since. The formation of this line is for a double way, but only a single line is laid. The description of rail on it differs from that of the Sydney line, being the double headed rail, with fished joints and chairs, a description which, the Commissioners have reason to believe, will form a much more durable and perfect permanent way than the Barlow pattern of the Sydney and Parramatta lines. This opinion is borne out by that of the Engineer-in-Chief, Mr. Whitton, and by the hitherto working of the line.

4. The Campbelltown line has been marked out, and plans and estimates for this extension were forwarded with my letter to the Honorable the Colonial Secretary, No. 31, of the 1st August, in which permission was requested to proclaim.

5. This measure was authorized by the Colonial Secretary's letter, No. 59, of the 16th September, 1856, and the Commissioners accordingly issued the notice required by law, on the 29th October.

6. No further advance has been made for the completion of this important work, no funds being available for this service. The Commissioners regret the delay the more, being of opinion that this extension, with that on to Menangle, would have intercepted the traffic of the Southern Road, and made the present lines remunerative. The Government would thus have been placed in possession of information that would have fully determined the question of Railway extension, as applicable to the present wants of the Colony.

7. The Commissioners have great satisfaction in being able to report, that no accident has occurred to prevent the full working of the line from Sydney to Liverpool, since it was first opened.

8. The passenger fares are now based upon a charge of 4d. 3d. and 2d. per mile,—the English rates being 3d., 2d., and 1d. nearly, for 1st, 2nd, and 3rd class respectively. It will thus be seen, that the excess of the rates charged by the Commissioners over those of England, is not commensurate with the rates of wages, and consequent great additional cost of working a line of Railway in this Colony.

9. These rates are nearly the same as those fixed at the original opening of the line. They were subsequently reduced. On the opening of the Liverpool extension, and before the termination of Mr. Randle's contract for working the line, they were again advanced to the original standard. The reduction did not materially affect the number of passengers, but the increase caused a falling off in this respect, with an augmentation of the gross receipts.

10. The Commissioners are decidedly of opinion that the rates, as now fixed, are as low as they are justified in going, and in this opinion they are borne out by Mr. Whitton, who has gone very carefully into the subject.

11. The works on the extension from Hexham to East Maitland have been satisfactorily carried out by the contractor, Mr. Wright. The Commissioners have not finally taken over these works, but they are in so advanced a state, that were the terminal arrangements and rolling stock complete, the line might be opened for traffic at an early date.

12. On careful consideration of the whole question, the inapplicability of Honeysuckle Point for so important a Terminus as that of Newcastle became evident, and that the site should be at the Sand Hills, beyond Watt-street.

13. On the 31st July, 1856, the Commissioners submitted plans and an estimate (amounting to £70,235) of the arrangements they proposed to carry out in accordance with this view, and requested permission to proclaim this extension. The question still remains unsettled, and a subsequent modified proposition is now before the Government, reducing the expenditure, in the first instance, to a sum not exceeding £25,000.

14. Mr. Wright's contract terminates about one mile from East Maitland. The Commissioners recommended that the extension from this point should be carried on through East to West Maitland, with a station at each town. Funds for this service are included in the estimate, of which the £200,000 vote forms a part. This extension has been now fully surveyed and marked out, and is only awaiting the determination of some minor matters preparatory to its being submitted to Government for proclamation. It is highly expedient that this extension, and also that through Newcastle, should be proceeded with, with all possible despatch; without them the line between Newcastle and East Maitland can hardly be expected to offer an inducement for traffic.

15. The Commissioners have the following Rolling Stock on the Southern Line, viz. :—

- 23 Passenger Carriages, capable of holding 728 passengers.
- 5 Locomotive Engines, of which 4 are for mixed traffic.
- 6 Luggage Vans.
- 4 Horse Boxes.
- 1 Sheep Van.
- 1 Meat Van.
- 2 Carriage Trucks.
- 46 Goods Waggons.

Four of these engines, built by Stephenson and Co., are much larger than necessary for the present traffic of the line, even for the conveyance of goods; but for the passenger traffic, the traffic for which they are chiefly used, their great weight and power render them most objectionable as engines. One half the weight would be quite sufficient to run the ordinary passenger trains, which consist of about six carriages and luggage van.

16. On an analysis of the accounts for three months, ending 31st December, the cost per train mile run for working the traffic (both passenger and goods) is—

	s.	d.
Wages to Station Clerks, Porters, Enginemen, Firemen, Guards, and all wages chargeable to Revenue, per train mile run.....	3	6½
For materials, firewood, oil, tallow, waste, stationery, and general stores, per train mile run.....	2	2½
Permanent Way, for repairs and ballasting, per train mile run .....	1	5¼

## REPORT FROM CHIEF COMMISSIONER OF RAILWAYS FOR 1856. 3

17. The receipts for October, November, and December, are 8s. 4½d. per train mile, or a total of £9,705 2s. 4d.

	£	s.	d.
Out of this sum there has been paid for Wages .....	4,116	2	8
Materials, Stores, &c.....	2,564	19	8
Permanent Way 13½ miles, Sydney to Parramatta.....	1,666	6	0
Total .....	8,347	7	11

18. The receipts over actual expenditure for three months being £1,357 14s. 5d.; but it must be noted that the line between Liverpool and Parramatta (8½ miles) has been maintained by Mr. Randle, under his contract for the construction of that portion of the line.

19. The expenditure for the last three months has been much beyond a fair average amount for repair to Rolling Stock, as two of the large engines have undergone extensive repairs since the termination of Mr. Randle's contract for working the line, and are now in very good working condition.

20. Mr. Whitton is of opinion that steps ought to be taken to obtain the service of the following officers from England, as men thoroughly experienced cannot be engaged in the Colony, viz.:

Locomotive Superintendent, who would also act as Traffic Manager.

For the Permanent Way, a thoroughly practical man, accustomed both to the maintenance of Permanent Way and the construction of all kinds of Railway Works.

An Accountant experienced in the most approved and established mode of keeping the detailed account of the working of the line.

The probable salaries for these officers he puts down as under:—

Locomotive Superintendent	... ..	£800 per annum.
Permanent Way Inspector	... ..	400 "
Accountant	... ..	400 "

21. The Commissioners concur with Mr. Whitton in the expediency of this step, and should this recommendation meet with the approval of the Government, that gentleman's great experience would ensure the engagement of most competent officers.

22. The total number of passengers, &c., that have travelled by rail during the year, is as under, viz. :—

Passengers, 1st Class	... ..	31,434½
„ 2nd Class	... ..	39,328½
„ 3rd Class	... ..	279,960½
Total		350,723½
Horses	... ..	2,838
Dogs	... ..	1,942
Carriages	... ..	770

Total weight of goods 4,657 tons.

23. Mr. C. Kemp having resigned his commission on the 29th of February, previous to leaving the Colony for England, Captain J. S. Hawkins, R. E., was appointed to the vacancy, and took his seat at the Board on the 11th March.

24. Mr. Wallace, the late Engineer-in-Chief both to the Sydney and the Hunter River Railway Companies, and subsequently to the Commissioners, resigned his appointment on the 29th February. Mr. Whitton, who had been engaged at home, arrived in the Colony in December, and the Commissioners have, by a Board Minute of the 15th January, appointed that gentleman Engineer-in-Chief to the Railway Department, in accordance with the terms of his agreement.

25. In concluding this Report, I am desirous of alluding to the fact, that a diversity of gauge exists between this and that of the neighbouring Colonies, New South Wales being 4' 8½", Victoria 5' 3", and South Australia 5' 6", the magnitude of the evils that must ultimately arise at no distant period, and be entailed on the future inhabitants of the Colonies, from this circumstance, can hardly be overrated, and I would submit, therefore, that it is a question deserving the attention of the different Governments.

I have, &c.,

GOTHER K. MANN.

RAILWAY

RAILWAY ACCOUNTS FOR 1856.

ABSTRACT OF "GENERAL ACCOUNT" FOR THE YEAR ENDED 31ST DECEMBER, 1856.

	£	s.	d.		£	s.	d.
8-5. Dec. 31. To Repayment of overdraft on Commercial Bank at this date...	6,817	2	7	1856. Dec. 31. By Sydney Railway Company ... ..	24	0	8
1856. Dec. 31. „ Locomotive Expense Account ... ..	719	10	8	„ Flower and Company ... ..	7,638	15	8
„ William Randle (Sydney Railway Works) ... ..	54,554	0	4	„ Plant (Hunter River Railway) ... ..	1,602	6	7
„ Ditto (Liverpool Extension Works) ... ..	77,747	19	11	„ Colonial Treasurer ... ..	302,800	10	0
„ William Wright (Hunter River Railway Works) ... ..	80,138	2	1				
„ Exchange on Remittances ... ..	800	0	0				
„ Freight ... ..	5,320	18	8				
„ General Expenditure ... ..	2,333	17	11				
„ Stationery ... ..	62	17	9				
„ Interest on Bank overdrafts ... ..	358	0	0				
„ Rent of Premises ... ..	300	0	0				
„ Compensation for Land (Sydney Line) ... ..	173	5	0				
„ Ditto (Liverpool Extension) ... ..	6,024	5	0				
„ Ditto (Hunter River Line) ... ..	1,027	0	0				
„ Printing... ..	17	1	6				
„ Rolling Stock ... ..	3,696	2	9				
„ Stores ... ..	546	18	6				
„ Station Sidings ... ..	468	15	4				
„ Wages ... ..	550	17	3				
„ Plant ... ..	44,557	14	9				
„ Salaries ... ..	6,347	12	2				
„ Balance ... ..	19,503	10	9				
	£312,065	12	11	1856. Dec. 31. By Balance ... ..	£312,065	12	11
					£19,503	10	9

REPORT FROM CHIEF COMMISSIONER OF RAILWAYS FOR 1856.

ABSTRACT

Examined, Audited, and found correct,  
 G. KING,  
 ARCHD. CAMPBELL, } Auditors.

True Copy.

CHARLES J. NEALDS,  
 Secretary.

ALEXR. COOPER,  
 Accountant.

ABSTRACT OF "REVENUE ACCOUNT" FOR THE YEAR ENDED 31ST DECEMBER, 1856.

1856.		£	s.	d.	1856.		£	s.	d.
Dec. 31.	To Printing ... ..	320	9	6	Dec. 31.	By total Receipts for the Year ended this day ... ..	32,269	16	11
	„ Locomotive Expenses ... ..	646	9	6		„ Rents received from Labourers on the Line ... ..	13	4	0
	„ Engineering Expenses ... ..	452	12	7					
	„ Permanent Way ... ..	1,960	0	8					
	„ Wages Account ... ..	2,828	6	1					
	„ Salaries ... ..	2,141	13	7					
	„ William Randle (being 55 <sup>3</sup> / <sub>4</sub> cent. on Gross Receipts) ...	12,854	16	5					
	„ Stationery ... ..	53	7	9					
	„ General Expenditure ... ..	473	4	8					
	Repairs of Rolling Stock ... ..	57	5	6					
	„ Colonial Treasurer ... ..	10,481	7	5					
	„ Balance ... ..	13	7	3					
		<u>£32,283</u>	<u>0</u>	<u>11</u>			<u>£32,283</u>	<u>0</u>	<u>11</u>
					1856. Dec. 31.	By Balance ... ..	£13	7	3

Examined, Audited, and found correct,  
 G. KING,  
 ARCHD. CAMPBELL, } Auditors.

True Copy,

CHARLES J. NEALDS,  
 Secretary.

ALEX. COOPER,  
 Accountant.





1857.

## NEW SOUTH WALES.

## RAILWAY LINES IN THE SOUTHERN DISTRICTS.

(REPORT OF DEPUTY SURVEYOR GENERAL.)

*Ordered by the Legislative Assembly to be Printed, 13 March, 1857.*

THE DEPUTY SURVEYOR GENERAL to THE SURVEYOR GENERAL.

10 June, 1856.

SIR,

In attention to that part of your memorandum of the 28th March, 1856, in which you observe, that in passing through the country I should keep in view the great object of obtaining the most accurate information as to the best lines for trial surveys, more particularly as to the crossing points of ranges, and embrace every opportunity of obtaining information from the surveyors, on all points relative to Railway lines in their respective districts,—

I have the honor to inform you, that although in visiting the Railway surveyors on the Goulburn line (the particulars I have already reported), I did not fail to pay attention to the course they were pursuing, and to give such directions as appeared to me to be required, still, as the line to Goulburn had already been determined by the inspection of different engineers and surveyors, I did not consider it incumbent upon me to make any particular examination of that part of the Southern line. When, however, I was at Goulburn, I looked over the neighbourhood for the purpose of ascertaining the best position for a Terminus, and the best course for entering and leaving the town. I also took advantage of Mr. Mann's being at Goulburn to go down the Wollondilly some five miles with him, and ascertain his views as to the approach to Goulburn, which presents considerable difficulties. Mr. Mann was so obliging as to furnish a sketch, which I sent to Mr. Condon for his guidance, with an explanatory memorandum.

My inspection for Railway lines commences, I consider, at Goulburn. I examined the country as I went along, made such detours as appeared to be necessary, and obtained all the information I could; and I was particularly indebted to Mr. Hamilton Hume, who, being thoroughly acquainted with the country between Goulburn and Yass, suggested to me a line to Yass, which, although it may be somewhat circuitous, still, as it is entirely level and passes through a fine agricultural district, seems a very desirable one. On leaving Goulburn at the town boundary, this line would follow the Yass road for about seven miles; it then takes the track towards Lake George, which passes the south end of Wollongorong Lagoon and the north end of Tarrago, and onwards through Colledgar to the Gap of Carrigal, a pass in the Cullarin Range which I am led to believe could be surmounted without any great difficulty. At this gap you leave the waters of the Lake George Basin and come upon the head of Gundaroo Creek, a tributary of the Yass River; following the course of Gundaroo Creek the line crosses the Yass River, which is followed downwards on its south bank to the confluence of Morumbateman Creek; crossing that creek it would still keep the river as far as possible, or perhaps entirely, as far as Yass; but considerable difficulties are presented on entering and leaving Yass, which can only be solved by accurate surveying and levelling; hence the line follows the road, and with some cuttings would reach the village of Bowning.

Another, and more direct line, also pointed out by Mr. Hume, would, on leaving Goulburn, keep the line already alluded to as far as Tarrago Lagoon, and thence passing through Milbang Plains and the Dairy Flats it reaches the Cullarin Range at Rose's Gap, a pass which Mr. Hume describes as being far from formidable; it then crosses Lerida Creek, and, avoiding Mount Dixon, passes through a somewhat level country to Gardiner's Inn, on the Yass Road; crossing that road it seeks the old pass in the Munday Range—(what the nature of this pass is, and whether it would require tunnelling, I could not accurately ascertain, but it was said to be far from difficult; it is still used by up-country drays in preference to the present pass);—hence the line is straight on through Bargo to the village of Bowning, before mentioned; so that this line would involve a Terminus at Bargo, and a Branch Rail to Yass, unless the line were to terminate at that town. From Rose's Pass the country traversed by this last mentioned line is nearly all barren and useless, and it will be perceived, that although more direct than the line by Gundaroo it has two mountain passes to get over, whereas the Gundaroo line has only one; moreover, it does not lead towards, or open up, any populous or agricultural country, whereas the Gundaroo line would facilitate the intercourse with the Lake George country, and lead towards the high road to Queanbeyan and Maneroo, and, as far as I can see, is far superior in every respect to the Milbang line. The Munday Range extends east and west; the Yass River, which is

on its south side, runs also east and west, and therefore presents a level for the Gundaroo line, which follows its course; but on the north side of the Mundoonen Range the rivers flow northerly from it, and, consequently, the Milbang line, which is on its north side, must pass over a broken country; so that the physical geography of the country is entirely in favour of the Gundaroo line.

At Bowning village the possibility of continuing a line of Railway in the direction of the high road ceases. The ranges are so formidable, and great portions of the country so broken, that any Railway line in that direction is impracticable. Thus, between Bowning and Bookham is Conroy's Gap; just out of Jugiong is Cooney's Hill, and then the Money Money Ranges; whilst beyond Gundagai, on the road to Albury, is the Tarcutta Range; all these are most formidable obstacles to Railways. Nor is it possible to follow the Murrumbidgee itself; for where the ranges do not press upon its banks—wherever there are flats—they are subject to the most fearful inundations. In every way the thing is impracticable, and it is very significant that the people on this road are fully impressed with the idea that a Railway can never pass through their country. Having ascertained this, I took whilst at Jugiong a trip to the north, and there, from reliable information which I obtained, I found that by carrying the line of Rail to the north, not only was the country practicable, but almost a dead level. Thus, on leaving Bowning there is a level line to Binalong, recently discovered and travelled by the Commissioners; from Binalong to Cunningham Plains a level straight line may be taken; and onwards in the same direction to the reserve at Wollondoon, and by Coolamundary, Hurley's station; beyond Hurley's there is a low range to get over, and the line then reaches the waters of Hooligun's, or Jewnee Creek, by following which you get a dead flat to the Murrumbidgee River, near Wogga Wogga. Thus, from Bowning to Wogga Wogga the line would pass through about 110 miles of country almost level; and although the line appears to be circuitous, still, were it possible to follow the Murrumbidgee, the bend to the south would be as great as is the bend to the north, for even the road from Bowning to Wogga Wogga is 100 miles long. Probably it might not be necessary to go so far north as Cunningham Plains; but this will be ascertained when the country comes to be examined, and levels taken. Of course it was incumbent upon me to see, and to inquire, whether, on leaving Lake George or Yass, it might not be possible to keep to the south side of the Murrumbidgee, and so, by way of Tumut, reach Albury by a straighter and more direct line; but all the answers to my inquiries on this subject were to the effect that it was utterly impracticable; and, indeed, when the physical geography of this portion of the country is considered, there can be little doubt on the subject. The sources of the Murrumbidgee and the Murray Rivers being in the highest part of the Australian Alps, the ranges which divide those rivers are most formidable; whilst the tributaries of the Murrumbidgee are so numerous, large, and deep, that neither road nor Railway can be taken on the south side of the Murrumbidgee, nor is it likely that the course of that river could be followed on its south side. Having sketched out the line as far as Wogga Wogga there is no difficulty in crossing the country to the Murray River at any point below Howlong; but the further course of the Railway to Melbourne, presuming that to be the ultimate intention of any continuation of the line beyond Goulburn or Yass, must in a great measure depend upon the views of the Victorian Government.

On my arrival at Melbourne I ascertained that the Government there had determined upon commencing a Railway to Bendigo, and thence down the Campaspe River, reaching the Murray at Maiden's Punt, a point about 120 miles lower down the Murray than where our line would touch that river, provided the Railway were taken in a straight line to Melbourne. Unless, therefore, the Government of Victoria would take their line from Echuca (Maiden's Punt) up the Murray, so as to supply their Gold Fields at the Ovens and meet the Sydney line, it would, if I may offer an opinion, be scarcely worth while at present to contemplate an extension of our line beyond Goulburn or Yass.

The advantages that would result to both colonies, were the direct line between the two capitals carried out, are sufficiently apparent; but the line to Bendigo is evidently so essential to the people of Victoria that the straight line cannot be looked for at present. Still, seeing the great income that would result from such a work, by its at once absorbing all the steamboat and shipping traffic between Melbourne and Sydney, independent of other important considerations, the connexion of the two lines does appear to warrant the serious consideration of both Governments.

The Ovens Gold Fields are very rich, and likely to prove very extensive. There is already a considerable population—some (11,000) eleven thousand; and I apprehend that were the yield of those Gold Fields and the yield of Bendigo to be compared with the amount of their respective populations, it would be found to be much the same. It may, therefore, be assumed that the population at the Ovens will increase, and that it might then be worth while to carry our Railway to the Murray, with a view partly to the supply of those Gold Fields, should the Victorian Government decide upon leaving that district out of their present Railway arrangements. The connection of the two points, viz., Echuca and Albury, by means of the navigation of the Murray River, must not, however, be lost sight of.

I may add, that in passing through Victoria I did not perceive any difficulty in the way of a straight line of Railway from the neighbourhood of Albury to Melbourne, through the numerous towns on the road to that capital. The country is almost level, with the exception of the dividing ranges near Kilmore, through which, after the taking of numerous levels, a passage has at length, as I understand, been found.

A sketch, exhibiting the features of the country as far as surveyed, and showing the lines for trial survey suggested in this Report, is herewith.

I have, &c.,

JOHN THOMPSON,  
Deputy Surveyor General.

1857.

NEW SOUTH WALES.

## RAILWAY EXTENSION.

(REPORT OF CAPTAIN HAWKINS ON SURVEYS, &amp;c.)

*Ordered by the Legislative Assembly to be Printed, 17 March, 1857.*

*GENERAL REPORT on the Explorations and Surveys made by the Detachment of Royal Engineers under the command of Captain J. S. Hawkins, R.E., with a view to Railway Extension in the Colony of New South Wales.*

Sydney, 24 February, 1857.

The duty assigned to the Detachment on its arrival in the Colony was the prosecution of Railway Explorations and Surveys. As, however, the examination of the country between Campbelltown and Goulburn, of the intended prolongation of the Hunter River Line, and of the Moreton Bay District, had already been entrusted to a staff of Civil Surveyors recently arrived from England, my attention was at first directed solely to the proposed western extensions from Parramatta to the Hawkesbury and Bathurst. Subsequently, at the request of the Superintendent of the Australian Agricultural Company, two Surveyors were sent to Port Stephens, to undertake a trial survey from that place, through Stroud, in the direction of the Manning River and Armidale; these men are rationed, their chainmen paid, and means of transport, &c., provided by the Company. The exploration of the country between Goulburn and Yass, and thence to the Murrumbidgee, with the view to ulterior extension to the River Murray and Colony of Victoria, has also been undertaken by the men of the Detachment.

2. On their first arrival, as soon as the men were quartered at Parramatta, the first duty undertaken, was to prepare the numerous tracings requisite for their guidance in the performance of a difficult duty in an intricate and but partially surveyed country. I may here observe, that every portion of their work has been performed by the sappers themselves without any extraneous assistance whatever. A considerable portion of their field equipment was also prepared by them, including the construction of levelling staves and the engraving of copper plates for the graduation of the staves and for protractors for plotting plans—duties requiring extreme care and skill.

3. The first field duty undertaken was the survey and levelling of two lines previously contemplated, and now pointed out for examination, leading from the Parramatta and Liverpool Railway to Prospect Hill. It was at that time thought probable that an experimental tramroad would be laid down to Prospect, for the purpose of conveying blue metal for the construction and repair of the streets of the City, and other similar purposes, to Sydney. As I think that the line of Railway to Penrith and Windsor will not follow either of the lines indicated, and that any rail or tramway laid down for the abovementioned purpose, will necessarily form a branch from the main line, but little remark seems called for upon the result of these proceedings. The first line branches from the Parramatta and Liverpool Railway, about a mile beyond the Parramatta Station—at a distance of nearly  $4\frac{1}{2}$  miles it forms a junction with the second trial line. The country it passes over is not very favorable, being very irregular and undulating; but there is nothing very formidable or impracticable in it for a Railway, though the necessary works would be too costly for a tramway. It would have to surmount about 100 feet in a third of the distance, which would give a general gradient of nearly 1 in 80 as probably the most severe. I am, however, not prepared to state

that the line surveyed was selected by the Surveyor with sufficient judgment to ensure its being the best that can be obtained in this direction, which has the material advantage of forming a much better and more convenient junction with the Parramatta and Liverpool Railway than the second line now considered. This second line starts from the Fairfield Station,  $4\frac{1}{4}$  miles from the Parramatta Station—it forms a junction with the first line at a distance of about  $3\frac{3}{8}$  miles; and, supposing the Penrith line to follow this course, the branch to the Prospect quarries would leave the main line about  $\frac{3}{8}$  mile beyond this junction. This line follows the valley of the Prospect Creek, and is most favourable throughout, having a gradual rise of about 82 feet in the distance,  $4\frac{1}{4}$  miles, giving a general gradient of 1 in 270. The branch to the quarries is not favourable, there being a rise of 235 in about  $2\frac{1}{4}$  miles. The survey of this  $2\frac{1}{4}$  miles has been taken to the quarries, standing on 2 acres of land belonging to the Government; but other and much more convenient quarries would probably be opened should facilities for the conveyance of the stone and metal with which this neighbourhood abounds be offered. All this work, amounting to  $10\frac{3}{8}$  miles in length, has been cross levelled.

4. Trial lines of levelling were continued from the end of the work above alluded to in the direction of Penrith and Windsor. Two lines have been levelled, to the extent of  $28\frac{3}{8}$  miles, to the south of the main road between Parramatta and Penrith, but with unsatisfactory results. The Surveyor has not displayed any judgment in adapting the direction of his surveyed lines to those points in the ranges between the several streams intersecting this district nearly at right angles to the course of the lines, which would offer the lowest summits and greatest facilities for the construction of a Railway; but the sections show that there are considerable elevations to be surmounted, which though modified could not be avoided. As the country on the north side of the Western Road is much more favourable, and presents other important advantages in connexion with a line through it, the levels already taken will probably be found to supply sufficient information as to the character of the district; and therefore this portion of the work seems at present to require no further remark.

5. A main line, and several alternative lines in connexion with parts of it, have been levelled to Penrith on the north side of the Western Road. This work shows the practicability of obtaining a perfectly satisfactory line from the Eastern Creek to Penrith over a distance of about  $12\frac{1}{4}$  miles. In this distance two summits occur which do not exceed about 100 feet in elevation above the intervening valleys, and which can be surmounted by very favourable gradients. The extent of levelling performed in this section of the work amounts to  $22\frac{3}{4}$  miles.

6. From the neighbourhood of the Eastern Creek a most favourable and direct line can be obtained to Windsor, over a distance of about 10 miles. The sections taken are generally very favourable; the main difficulties to be obviated being the prevalence of inundations on the low lands, and the necessity for crossing several of the principal streams. The amount of levelling performed in this section amounts to  $30\frac{1}{2}$  miles.

7. The suggested junction of the Penrith and Windsor lines at or near Eastern Creek seems to present a favourable position for a station in communication both with the Penrith and Richmond Roads; there being already a communication between those roads in use on the eastern side of the Creek—such a station will, of course, be necessary to work the branch line. The main line of Railway between this junction and the Sydney and Parramatta Railway remains to be considered. With this view a series of trial levels are now in progress and are nearly completed, but the plans and sections have not yet been supplied. However, I may venture to state, that I entertain no doubt whatever that a favourable line can be obtained—branching from the Sydney and Parramatta Railway about a quarter of a mile from the Parramatta Station, passing through the narrowest and least objectionable part of the town of Parramatta, through the Government Domain between the Government House and the river, and thence following a direct course, or as nearly so as the intervening country will admit, to the suggested junction at Eastern Creek. Such a line will present the important advantages of securing a station for the town of Parramatta and its extensive and populous neighbourhood, especially that on the north side of the river, affording a direct course for the main line as far as the suggested junction, equally advantageous to the interests both of Penrith and Windsor; and thence to those towns favourable branch lines can be obtained. The length of the main line from the Parramatta junction to Eastern Creek would be about 10 miles; from the creek junction to Penrith,  $12\frac{1}{4}$ , and to Windsor, 10 miles,

miles, or in all about 33 miles. No trial levels have yet been taken between Windsor and Richmond, but they will shortly be put in hand. No difficulties are to be apprehended, and such an extension would add about  $4\frac{1}{2}$  miles to the Windsor line.

8. With respect to surveys and explorations beyond the Hawkesbury, in the direction of Bathurst, I am not in a position to offer a very favourable report. Surveys and levelling of the main line of road over the Blue Mountains, and of the Currajong or "Bell's" Road, have been undertaken. In the absence of reliable information as to the elevations over which these roads pass, accurate longitudinal sections of them were considered very desirable as data to which to refer any other work, or to assist in the exploration of the immediately intervening districts; and they also had for their object the question of laying down tramways on existing roads. Plans and sections of about 26 miles of the main road from Penrith Bridge have been received from the Surveyors, and that road has been levelled as far as Hartley, but the plans, &c., of the latter part have not yet been furnished. In the first 26 miles the ascent is 3,022 feet above Penrith Bridge, averaging 116 feet per mile, or about 1 in 45 for the whole distance. The ascent of the Lapstone Hill is about a mile in length, and the elevation is 420 feet, or about 1 in  $12\frac{1}{2}$ . This would slightly modify the average of the remaining 25 miles to 104 feet per mile, or 1 in 50. The road continues to rise for several miles further, attaining its greatest elevation about half a mile beyond the Toll-bar, which exceeds 4,000 feet above Penrith Bridge, from which it is distant about 41 miles. The survey &c., of Bell's Road has been carried beyond Mount Tomah, where it reaches an elevation of 3,257 feet above Richmond Ferry; but no plans and sections have yet been furnished by the Surveyors. I have had the district over which the main road passes carefully explored, with the view of striking out some modified lines for examination and survey, presuming it to be very desirable to obtain the *most direct possible* line to the westward; the result of this exploration has been altogether unsuccessful. The Surveyor has suggested one or two modifications of the immediate ascent from the Hawkesbury, which I have directed to be put in hands immediately, more to complete our information on this point than from any hope of its proving practically useful. The watershed of the Grose and Cox's River, which is now traversed by the road, cannot be departed from without encountering such a succession of ravines and torrents as to render such a course totally impracticable. A similar exploration of the district through which the Currajong or Bell's Road passes has not been made, for as that road, throughout its length or nearly so, occupies the watershed between the Grose and Colo Rivers, precisely the same objection would apply to the practicability of leaving it. The valley or *ravine* of the Grose has also been explored, but, as I expected, without success. This was undertaken in consequence of the Surveyor having suggested the possibility of obtaining a practicable line (with the necessity, however, for two tunnels) from the western foot of the Blue Mountains to Bathurst, *if* connected with the head of the Grose by a tunnel 3 miles in length, provided that a Railway could be carried up the valley of that river. I may here observe that I do not think it will be found practicable to make use of the valleys of any of these rivers; but neither do I think it will be found possible to carry out Railways to any extent in this or most other countries without having recourse to tunnels, notwithstanding the very great expense attending their construction. In concluding this portion of my Report, I must express my conviction that no practicable line for either a railroad or tramway from the Hawkesbury to Bathurst exists between the Cox and Colo Rivers; and, consequently, that a direct line between Sydney and Bathurst cannot be obtained.

9. Plans and sections of about 28 miles of the levelling performed from Port Stephens through Stroud, in the direction of the Manning River have been received, and much more field-work has been done, the results of which have not yet been furnished. I am not in a position to say much about this section of the work. The sections shew some formidable obstructions, both from ranges and rivers, which would have an important bearing on the practicability of a line in this direction; but in so extensive a district, and between such distant points, very much more complete exploration must obviously be necessary before an opinion of any value can be hazarded. I would suggest that some communication be had with the Superintendent of the Australian Agricultural Company respecting the continued employment of the Surveyors engaged on this duty. It may not be the intention of the Company to undertake so important and expensive a work, and the work already done will probably shew that the course hitherto followed by the Surveyor leads over a country which would involve expenses in the construction of a tramroad which they would not under any circumstances be disposed to incur. The information obtained may prove useful to the  
Government

Government with regard to the question of future Railway Extension, especially as Port Stephens is a harbour of considerable importance and value, and it is situated in a coal producing district.

10. The exploration of the country between Goulburn, Yass, and the Murrumbidgee River, is in progress; but no surveys will be undertaken until the probability of obtaining a favourable, if not the best line in that general direction is ascertained. The Surveyor's instructions provided for his first turning his attention to two courses between Goulburn and Yass, pointed out in a Report presented to you by the Deputy-Surveyor General as the result of his exploratory journey in the beginning of last year, dated 10th June, 1856. The first of these lines, the "Gundaroo line" has been minutely explored, extending over a distance of about 70 miles; the result is very unfavourable, and the Surveyor recommends that the survey of it be not undertaken pending further explorations. He is now engaged in exploring the Deputy-Surveyor General's second line, the "Millbang line," and in his last Report he states that, as far as he had then had an opportunity of examining, it seemed likely to prove the more desirable of the two as far as facilities of construction are concerned. The Deputy-Surveyor General recommends a circuitous course from Yass to the Murrumbidgee by way of Cunningham's Plains, &c.; and the Surveyor states his opinion that this will probably be the best line, but that it may also prove most desirable to proceed in a more direct course from Goulburn to Cunningham's Plains, thus passing considerably to the north of Yass. Nothing very definite can, however, be said at present on this very important question until we are put in possession of much more complete information, when the surveys can be proceeded, with without delay.

J. S. HAWKINS,  
Captn. Royal Engineers.

THE SURVEYOR GENERAL,  
Sydney.

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1856.

NEW SOUTH WALES.

## RAILWAY EXTENSION.

(MINUTE OF HIS EXCELLENCY THE GOVERNOR GENERAL.)

*Ordered by the Legislative Assembly to be Printed, 4 December, 1856.*

W. DENISON,

*Governor General.**Message No. 11.*

In accordance with the advice of the Executive Council, as expressed in the Minute herewith submitted, the Governor General lays before the Legislative Assembly a Memorandum expressive of his views with relation to the extension of Railways in New South Wales.

*Government House,**Sydney, 4 December, 1856.*

### ENCLOSURE TO MESSAGE NO. 11

Proceedings of the Executive Council, on the 24th November 1856, with respect to the future construction of Railways.

Minute No. 56-62, confirmed 1st December, 1856.

His Excellency the Governor General lays before the Council a memorandum, in which His Excellency explains his views upon the subject of the future construction and extension of Railways in New South Wales.

2. The general results arrived at by His Excellency may be briefly stated to be as follows, viz., that it is desirable, under present circumstances, that lines of Railway for locomotives should only be continued southward to Campbelltown, northward to the intersection of the Wollombi Road, about 8 miles west of Maitland, and westward to Penrith or Richmond, and that beyond those points a less expensive system of Railways, worked by horse-power, should be introduced, at a probable cost of £4,000 per mile, including rolling stock. His Excellency estimates that in this manner lines to Albury on the south, to Easthurst on the west, and Armidale on the north, may be completed for a sum of £2,770,000, but that if allowance be made for the extension of the Sydney Terminus to the northern end of Pitt-street, £3,000,000 will be required, in addition to the sums inserted in the Estimates for 1857.

3. Although the Council without further information on the subject, and without being placed in possession of the result of some actual experiments to test the feasibility and cost of constructing and working Horse-railways upon the principle indicated, are not prepared to advise the adoption of the very extensive measure proposed in His Excellency's Memorandum, yet they consider it desirable that a proposal of such vital importance to all the principal districts of the Colony, and involving so very large an increase of the Public Debt, should be brought without delay before both Houses of Parliament, in order that the important question involved may be publicly discussed before the Government resolves on taking any action upon it.

EDWARD C. MEREWETHER,

Clerk of the Council.

### MEMORANDUM—RAILROADS.

The time, I think, has arrived when the Government should be prepared to ask from the Legislature an approval of some general scheme with relation to Railroads, upon the strength of which approval, (by resolution or otherwise), arrangements might be made for the execution of the work as a whole, instead of by contracts embracing small portions of 8 or 10 miles, as at present.

In the adoption of some general scheme of this kind, the whole Colony will feel an interest. Each district will comprehend that its particular welfare is cared for, whereas the present mode of carrying on the work excites no general feeling in its favour, and leads to suspicions that the interests of the more distant parts of the Colony are postponed to those of the districts in the immediate vicinity of Sydney.

The nature and amount of the work already executed will be made sufficiently clear to the Members of Council by the following précis, in which will also be included an account of the preparations which have been made for the further extension of Railways in different directions, with this information, and with the data which I propose to submit for consideration, the Council will be in a position to advise as to the character of the general scheme which it will be desirable to adopt, and as to the extent of the guarantee to be sought for from the Legislature, in order to enable the Government to go into the English market, holding out such inducements to men of capital to embark in the work of constructing these Railroads as would ensure a sufficient amount of competition, and be a guarantee for the rapid completion of the work.

#### PRESENT STATE OF RAILROADS.

The line from Sydney to Parramatta is completed throughout its length with a double line of rails. It is continued as far as Liverpool as a single line, but the cuttings, bridges, embankments, &c., are made wide enough to receive a double line. The accommodation at the Sydney end of the line is not sufficient for an extended goods traffic, such as will naturally result from the continuation of the present line to the southward and westward. Neither has there been any adequate preparation made for carrying the goods, (should it appear to be desirable so to do,) along the branch line to Darling Harbour, or for prolonging the line into Sydney either to the Haymarket, where it would be possible to make an extensive Depot for agricultural produce of every kind, or still further by a line down Pitt-street to the Circular Quay. Provision has, however, been made in the Estimates for 1857 for the erection of additional buildings and workshops at the main station; but the question of the continuation into the City, or towards Darling Harbour, should be taken up without delay.

Preparations have been made to continue the single line from Liverpool to Campbelltown, a distance of about 12 miles, and a sum has been inserted in the Estimates for the execution of this work in the course of 1857.

A survey has been carried on for about 4 miles beyond Campbelltown, as far as the bridge over the Nepean at Menangle.

Beyond Menangle the surveyors are at present employed in levelling and marking out the road as far as Goulburn, a distance of about 88 miles, but the country is rugged and mountainous for a portion of the distance, and the cost of constructing the line for Locomotives will be proportionably great.

As, however, the surveys which are now making have for their object the determination of a line which will answer for Locomotive power, it would be very desirable that the character of the traction to be employed should be *at once decided*, in order that the labour of the Engineers and Surveyors should be directed to the particular object for which their assistance is required, and not be wasted on lines which may never be carried out, or, at all events, not for several years to come.

I propose, hereafter, to call the attention of the Council more particularly to this branch of the subject. Directions have been given for the employment of parties in reconnoitring the line beyond Goulburn towards the Murray River, where it is proposed to connect it with the line from Melbourne.

Beyond Parramatta, to the westward, lines have been surveyed towards Penrith and towards Windsor, and levels are now being taken along both the present lines of road from the valley of the Hawkesbury to Bathurst, viz., the road up Lapstone Hill from Emu Plains, and that by Carrajong or Bell's Line. No active steps have been taken to commence work upon these lines; neither are they included in any Estimate for 1857.

From Newcastle to Maitland the line is nearly completed; the stations, however, are not built at either Terminus. It is proposed to carry the line through Newcastle, in the rear of the line of wharf about to be constructed under the powers given in the Hunter River improvement Act, and this arrangement will give great facilities to the coal trade of the Port, a large portion of which will be brought down by the Railroad; it will also afford great convenience to the passengers landing at Newcastle. Money is placed upon the Estimates for the completion of this work during the present year. There is one question to be decided with reference to this extension, and that is, the amount which should be contributed by the Railroad towards the construction of the wharf. By the alteration proposed in the position of the Terminus, the Railroad gets the benefit of the wharfage in front of Newcastle, of which it may be said to monopolize a large portion. It would have been necessary to construct an extensive wharf for the coast traffic, which will come down the line, the expense of which has now been spared. I think, therefore, that it would be advisable to charge the cost of a portion of this wharf to the Railroad.

At the Maitland end of the line, it is proposed to carry the road through East and West Maitland, placing a station at both Towns. The necessary plans have been made, and the money for the work will be provided out of the £200,000 to be raised during the present year.

Surveys have been made for the continuation of the line for Locomotives, for a distance of about 8 miles beyond Maitland, and money has been provided in the Estimates of 1857 for the completion of the work.

Surveyors are employed upon the road beyond Maitland, in the direction of Armidale; but the remarks made with reference to the line from Menangle to Goulburn apply here with equal force, and point out clearly the necessity of coming to some definite understanding as to the description of power which is to be employed, whether horse or locomotive.

A party has been employed in surveying a line from Port Stephens towards Armidale, towards the cost of which the Australian Agricultural Company has contributed.

Parties



Parties are also employed in surveying lines of road from Brisbane to Ipswich, and onward to Darling Downs, on the upper country to the west of the coast range.

All these surveys are in progress, and the results will be in the possession of the Government (at all events as regards large portions of these lines) before the end of the present year.

Preparations have been made, or are making, for lines of Railway in various directions, to the extent shewn in the following table :

	DISTANCE.	LOCOMOTIVE.	HORSE.
Sydney to Goulburn .....	125	33	92
Goulburn to Albury .....	255	...	255
Parramatta to Bathurst .....	100	20	80
Newcastle to Armidale .....	230	30	200
	710	83	627

I have not alluded to the lines which it may be desirable to carry out from Brisbane into the interior, as the information in my possession is too scanty to enable me to express an opinion *with* regard to them.

The distance from Brisbane to Ipswich may be taken at 30 miles, and which it might be as well to work with locomotives, but beyond that there are no data as to directions or distances.

There will, therefore, be 710 or 720 miles of Railroad required to complete the communication between Sydney and the frontier between New South Wales and Victoria, between Sydney and Bathurst, and between Newcastle and Armidale; of these 63 either have been, or will be, completed in the course of the year 1857, money having been inserted in the Estimates for the work; there will then remain to be constructed 647 miles, of which 20 are shewn in the above table as locomotive lines, leaving 627, which, in my opinion, should be constructed on a much cheaper plan, and be worked by horse-power. I think that the lines which have been constructed have been wisely adapted for locomotive power; they are trunk lines, and into them will be poured an amount of traffic, in a few years, of which at present we have but little conception. I do not, however, think, that for many years to come the traffic upon the southern line beyond Menangle, on the western line beyond Penrith or Richmond, and on the northern line beyond the intersection of the Wollombi Road, will be sufficient to compensate for the increased outlay in making and maintaining a locomotive line; and as it is desirable to push these useful roads into the country with as much expedition as possible, I would suggest that the Government should at once decide not to construct the expensive line of road beyond Campbelltown to the southward, beyond the Hawkesbury to the westward, nor beyond the point about 8 miles to the west of Maitland on the northern line; that from these points the lines should be continued, either along the present roads, making such deviations as may be advisable, or by such new lines as may be selected. The cost, however, of such lines should not exceed, on an average, £4,000 per mile, including in that sum the cost of the rolling stock required to transport the full amount of passengers and goods likely to be conveyed for the first year.

The completion of the line to Albury would require, in addition to the sum inserted in the Estimates for 1857, £1,388,000, or, in round numbers, £1,400,000; from Parramatta to Bathurst, 20 miles of locomotive line would cost about £250,000, and 80 miles of horse-line £320,000. Total, £570,000.

From Maitland to Armidale, 200 miles of horse-road, £800,000	
Making a total of	£1,400,000
	570,000
	800,000
	£2,770,000

And if allowance is made for the establishment which it will be necessary to create for the extension at the Sydney Terminus, &c., if we say in round numbers that three millions will be required, in addition to the sums inserted in the Estimates for 1857, I do not hesitate to express my belief that for such an amount the lines in question may be completed.

The following Estimate will shew the ground upon which I have formed my opinion that £4,000 per mile will be sufficient to cover the cost of laying down a line of rails along a road already cleared and fenced, or of laying down a similar line across the plains between Goulburn and Albury, where the country is open, and where no fencing will be necessary.

Earth works, including some extra work in levelling, slight deviations here and there, in order to avoid too steep a gradient, &c., £1,000. This, of course, must be an arbitrary amount. In some places more will be required, in others much less, but I think that the sum taken will be a full average; and across the plains, from what I have heard of them, it will be more than sufficient to cover all the work, including the dams or bridges which may be required.

Cross sleepers, one every 4 feet, 7 feet in length. Each mile is taken to measure, including sidings, 2,200 yards, an allowance of one-fourth, which is more than sufficient, making 1,650 sleepers, at 2s. 6d. each, £206 5s.

Longitudinal

Longitudinal sleepers 6 by 6, treenailed upon cross sleepers, 13,200 feet run, equals 3,300 cube feet, at 2s. 6d. per cube foot, £462 10s.

Both these items may, I am convinced, be reduced very much by the application of steam power to cut the sleepers into the proper size and form. A locomotive engine with a circular saw will supply sawn stuff in the bush at less than half the price named.

4,400 yards of iron rail spiked down to longitudinal sleepers, weight 28 lbs. to the yard, 55 tons per mile, at £11 per ton, £605.

730 cube yards of broken stone for road between rails, laid complete, at 12s. per cube yard, £438.

I have put this at a high figure, for any stone or any material will answer, sand with clay mixed, gravel, broken sandstone, ashes, &c. All that is wanted is to keep the horses feet clear of the cross sleepers.

880 yards at 5s., £220.

I have put this high also. The material from the ditches for draining the road across the plains will answer in most instances. It is to be observed that the necessity for the careful packing which is essential when the road is to be used by heavy locomotives at a high rate of speed, will not accrue on roads to be worked by horse power at low rates of speed.

Laying sleepers, spiking rails, &c., including spikes and treenails, £300.

Add for stables along the line from distance to distance, if necessary, £100.

It may be advisable that the Government should go to this expense, as it will enable more persons to compete for the contracts for conveyance.

Add for rolling stock, say 3 carriages per mile, at £150 each, £450.

#### SUMMARY.

	£	s.	d.
Earth work .....	1,000	0	0
Sleepers, (cross) .....	206	5	0
Do longitudinal .....	462	10	0
Rails, iron .....	605	0	0
Roadway .....	438	0	0
Ballasting .....	220	0	0
Laying rails... ..	300	0	0
Buildings .....	100	0	0
Carriages .....	450	0	0
	£3,781	15	0

Of this sum the following items may be looked upon as *material*, that is, as articles required for the Railway to be furnished at no cost to the Contractor, viz:—

	£	s.	d.
Sleepers, (cross) .....	206	5	0
Do longitudinal .....	462	10	0
Iron Rails .....	605	0	0
Rolling Stock .....	450	0	0
	£1,723	15	0

Making the cost for labour only about £2,277 per mile, of which a portion, say one-third, will be skilled labour, or that of mechanics, that is the labour required for a mile of Railway, will not exceed 13 labourers or 3 mechanics, or for 100 miles of Railway 1,300 labourers and 300 mechanics, for a year. A small sum will have to be added to the above for Superintendence: about £25 per mile will be ample.

I should be glad to see the work progress at the rate of 150 miles annually at the least. For this the Government would have to raise £600,000 by loan annually, the interest of which would amount to about say £35,000. If Contractors could be found to undertake to execute the work with greater rapidity, there could not, I imagine, be any objection to push it forward with all possible speed, for the more quickly the work is completed the sooner will the Country begin to derive a benefit from it, and as the money has to be borrowed, it matters but little whether it is borrowed at the rate £3,000,000 in five years or in three years. I think, however, that for the first year, at all events, we shall not be able to spend more than £600,000 properly.

I should wish, however, to commence the Western Line next year, and to add therefore £200,000 to the amount to be borrowed in 1857 for the commencement of the Locomotive Line to the Hawkesbury. The difficulty which the Government will have to encounter in the construction of so many Lines of Railway will be that of getting a sufficient number of Contractors whose competition will bring down the cost of the work to a minimum.

It will be hopeless to attempt to induce capitalists to venture out from England unless they are assured that they will be provided with work for some years to come, and that such a sum of money will be expended annually upon the work as will afford them a good profit upon their investments.

Should the Legislature pledge itself to the *completion* of the line above alluded to, and to the expenditure of say *not less* than £200,000 per annum upon each of them, time would be given between this and the end of 1857 for perfecting all the arrangements for making the Plans and Estimates, for communicating with Capitalists in England, &c.; but unless some specific understanding is had, first, as to the character of the Railroad to be made, and next, as to the amount of money to be annually expended upon it, it would be impossible to make any arrangements for pressing the work forward at a much more rapid rate than has been done hitherto.

W. DENISON.

1856.

NEW SOUTH WALES.

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# RAILWAY EXTENSION.

(INHABITANTS OF COUNTY OF ARGYLE.)

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*Ordered by the Legislative Assembly to be Printed, 19 December, 1856.*

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To the Honorable the Legislative Assembly of New South Wales.

The Petition of the Inhabitants of the County of Argyle, in Public Meeting assembled,—

SHEWETH :—

That the difficulty and expense of consigning merchandize between the county of Argyle and Sydney, arising from the absence of even a tolerable road, is operating most prejudicially to the interests of the Colony generally, and of the Southern District in particular; and that, unless measures are taken to facilitate the transit of goods, the whole custom and traffic of that portion of New South Wales which lies to the west and south-west of the County of Argyle, will shortly be diverted to the neighbouring Colonies of Victoria and South Australia.

That the traffic of goods between this county and Sydney consists of about nine thousand tons annually, the cost of the carriage of which amounts to nearly one hundred thousand pounds—this estimate being exclusive of all intermediate and passenger traffic—and that this quantity would be greatly increased, even with the present population, if any outlet existed by which produce could be sent to a market; and your Petitioners respectfully urge that a Railway would be cheaper to maintain, and better adapted to the necessities of the Country, than any other kind of road whatsoever, and that there is every probability that a line, constructed in an economical manner, between Goulburn and Sydney, would prove, not only a self-supporting, but a remunerative undertaking.

Your Petitioners beg respectfully to remind your Honorable House, that the extension of the Railway communication to Goulburn would partake of the character of a national work in a greater degree than any other line, in consequence of this being the great high road between the adjoining Colonies of Victoria and South Australia.

Your Petitioners commend these facts to the consideration of your Honorable House, and respectfully entreat that early measures may be taken to extend the benefits of Railway communication to the south-western districts of the Colony.

And your Petitioners will ever pray.

[*Here follow 938 Signatures.*]

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1856.

NEW SOUTH WALES.

## EXTENSION OF HUNTER RIVER RAILWAY.

*Ordered, by the Legislative Assembly, to be Printed, 16 September, 1856.*

To the Honorable The Legislative Assembly of New South Wales, in Parliament assembled.

The Humble Petition of the undersigned, the Members of the East Maitland Improvement Committee.

RESPECTFULLY SHEWETH:—

That at a Public Meeting duly convened of the Inhabitants of the Town of East Maitland, held on the nineteenth day of September, one thousand eight hundred and fifty-five, your Petitioners were constituted and appointed a Committee to watch over and protect the interests of the said town.

That your Petitioners having in view the general welfare of the whole Hunter District, and that of East Maitland in particular, on the nineteenth day of July now last past, convened a Public Meeting of the Inhabitants of East Maitland, to consider the expediency of petitioning His Excellency the Governor General for the extension of the line of the Hunter River Railway to Singleton, and thereby to open up the traffic of this vast district to a spot where first its advantages to the public might be experienced. This movement on the part of your Petitioners was deemed necessary in consequence of measures taken by the Inhabitants of a neighbouring town to endeavour to secure the benefit of the line *to that town alone*, and to induce the authorities altogether to *prohibit* the use of the Rail, so far as already completed, until it should have reached their own locality, finished and in working order.

That at such last mentioned meeting a Petition was prepared and adopted, to the same purport and effect as this your Petitioners' humble Petition, and concluding with the same prayer for presentation to His Excellency the Governor General; which Petition has been forwarded to His Excellency, bearing the signatures of six hundred and ninety-two Inhabitants of this and the surrounding District.

Your Honorable House is doubtless aware that the original line of Railway, for which the Act of Council was passed, was from Newcastle to East Maitland, and that it was intended such line should afterwards be extended towards Singleton, and, eventually, towards the Dividing Range; and that at the last Session of the Legislative Council a sum was voted towards the extension to Singleton, but was subsequently recalled.

Your Petitioners would humbly submit, that when the present line is extended, the original intention of the Government should be carried out in its integrity, and the extension be made to Singleton with all convenient speed.

That the opening up of the line to Singleton would be productive of great benefits to the whole District, by affording the means of speedy transit of produce from the upper country to the sea; and until it is so opened up, no revenue, at all commensurate with its enormous cost, can be safely anticipated; but when once the trains run through to Singleton, from the large quantities of merchandize that will be carried on the line to and fro, a paying return for the capital invested will arise.

Your Petitioners therefore humbly pray your Honorable House, that the extension, if any, beyond the Government Township of Maitland, may be made to Singleton, with such stations along the line as may be found advisable.

And your Petitioners will ever pray, &c.

[Here follow 22 signatures.]

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1857.

NEW SOUTH WALES.

Legislative Assembly.

RAILWAY TERMINUS AND WHARFS AT NEWCASTLE.

## R E P O R T

FROM

THE SELECT COMMITTEE

ON THE

RAILWAY TERMINUS &amp; WHARFS AT NEWCASTLE;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

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 ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

20 February, 1857.

Sydney:

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1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

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VOTES No. 56. TUESDAY, 9 DECEMBER, 1856.

21. Railway Terminus and Wharfs at Newcastle:—Mr. Flood moved, pursuant to *amended* notice—

(1.) That a Select Committee be appointed to inquire into the propriety of any alteration in the originally proposed Terminus of the Railroad at Newcastle; into the expense consequent thereon; and whether, in connexion with the Railway Terminus at Honeysuckle Point, and since the abandonment of the Jetty, any steps have been taken towards ascertaining the eligibility of Bullock Island as a site for the construction of wharfs; and whether any estimate has been made of the probable cost of such operations, in comparison with the contemplated outlay to be incurred by the present plan of the Commissioners.

(2.) That such Committee consist of Mr. Buckley, Mr. Barker, Mr. Gordon, Mr. Jones, Mr. Hay, Mr. Piddington, Mr. F. T. Rusden, Mr. Weekes, and Mr. Arnold.

Question—(1) That a Select Committee be appointed to inquire into the propriety of any alteration in the originally proposed Terminus of the Railroad at Newcastle; into the expense consequent thereon; and whether, in connexion with the Railway Terminus at Honeysuckle Point, and since the abandonment of the Jetty, any steps have been taken towards ascertaining the eligibility of Bullock Island as a site for the construction of wharfs; and whether any estimate has been made of the probable cost of such operations, in comparison with the contemplated outlay to be incurred by the present plan of the Commissioners—put and passed.

Question—(2) That such Committee consist of Mr. Buckley, Mr. Barker, Mr. Gordon, Mr. Jones, Mr. Hay, Mr. Piddington, Mr. F. T. Rusden, Mr. Weekes, and Mr. Arnold—put and passed.

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VOTES No. 76. FRIDAY, 23 JANUARY, 1857.

19. Hunter River Railway:—Mr. Barker moved, pursuant to notice, That the Petition of the Chairman, Deputy Chairman, and Committee of the Newcastle Chamber of Commerce, praying for certain extensions of the Hunter River Railway, presented by him on the 21st instant, be referred to the Select Committee on the Railway Terminus and Wharfs at Newcastle, now sitting.

Question put and passed.

Ordered to be referred accordingly.

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VOTES No. 89. WEDNESDAY, 18 FEBRUARY, 1857.

17. Newcastle Railway Terminus:—Mr. Flood moved, pursuant to *amended* notice, That the Petition presented by him on the 11th instant, in reference to the Newcastle Railway Terminus, be referred to the Committee now sitting on that subject.

Question put and passed.

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VOTES No. 92. FRIDAY, 20 FEBRUARY, 1857.

5. Railway Terminus and Wharfs at Newcastle:—Mr. Piddington, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Railway Terminus and Wharfs at Newcastle, appointed on the 9th December last.

Ordered to be printed.

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1857.

## RAILWAY TERMINUS AND WHARFS AT NEWCASTLE

## REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on 9th December last, "to enquire into the propriety of any alteration in the originally proposed Terminus of the Railroad at Newcastle; into the expense consequent thereon; and whether, in connexion with the Railway Terminus at Honeysuckle Point, and since the abandonment of the Jetty, any steps have been taken towards ascertaining the eligibility of Bullock Island as a site for the construction of Wharfs; and whether any estimate has been made of the probable cost of such operations, in comparison with the contemplated outlay to be incurred by the present plan of the Commissioners;"—and for whose consideration was referred, on the 23rd ultimo, "the Petition from the Chairman, Deputy Chairman, and Committee of the Newcastle Chamber of Commerce, praying for certain extensions of the Hunter River Railway;"—and on the 18th instant, "a Petition from certain Inhabitants of Newcastle and suburbs, in public meeting assembled, praying that Railway facilities may be afforded to the up-country Districts, before incurring the expense of establishing the Terminus of the Newcastle Railway at the Sand Hills;"—have agreed to the following Report, viz. :—

Your Committee have come to the conclusion, founded upon the evidence of the Chief Engineer of Railways, Mr. Whitton, as well as that of other witnesses examined by them, that the original proposal of the Railway Commissioners, to construct an expensive double line of Railway from Honeysuckle Point to Watt-street, Newcastle, at an estimated cost of £70,000, taking into consideration the limited amount of traffic that may reasonably be calculated upon, in connexion with the proposed Coal Line, is inexpedient, and ought to be abandoned. It seems that the Commissioners contemplated, in addition to a Goods and Passenger Line, upon a level with the road, another Line, called the Coal Line, constructed upon framing, at an elevation of twenty feet above the road level, and necessarily very expensive, for the delivery of coal. The objection to this proposal is, that the two principal Coal Companies at Newcastle—viz., the Australian Agricultural Company, and the Newcastle Coal and Copper Company—will have no inducement whatever to pay for the use of the Government Railway, as the Companies alluded to have made arrangements for steam power of their own, entirely independent of the Government Line, and at present little or no other traffic on the Coal Line could be relied upon. Your Committee, therefore, have felt no hesitation in arriving at the above conclusion.

Your Committee beg to recommend that a single Line of Railway for goods and passengers only, from Honeysuckle Point to the Wharf at Watt-street, should be laid down, in the most economical manner consistently with strength and sufficiency, and that the Railway buildings necessary at the Terminus at Watt-street should be of the most inexpensive description, more especially as your Committee feel impressed with the conviction, that if the shoal adjacent to Bullock Island be recovered from salt water, that no spot could be found better adapted for the accommodation of shipping, and for affording a large space of anchorage ground;—the land reclaimed would afford the merchant community of Newcastle, and the public in general, most desirable sites for wharfs, stores, and trading establishments.

Your

Your Committee have examined several witnesses, among whom is Mr. A. W. Scott, a Member of your Honorable House, and feel persuaded that the Harbour of Newcastle would be very greatly improved by the gradual construction of an embankment from the north end of Bullock Island to the neighbourhood of the Australian Agricultural Company's staiths; this might be accomplished by driving piles along a line to be determined by the Engineer, and then making it compulsory "that all vessels discharging ballast in the Port shall be obliged, under a penalty, to discharge their ballast behind the line to be marked out by "piles;" this operation would involve the Government in but a small expense, compared to the value of the land retrieved. The process would, unquestionably, reclaim a large breadth of the low land, between the line of embankment and Bullock Island; and, as the work proceeded, the land gradually reclaimed from shoal water might be sold by the Government, thus not only reimbursing the current expenses of the undertaking, but effecting a vast improvement in a Port increasing every year in importance.

As it is doubtful where the chief Terminus at Newcastle will be ultimately fixed, your Committee is of opinion that it would be undesirable for the Government to take up more land at Honeysuckle Point than is strictly required for Railway purposes.

W. R. PIDDINGTON,  
Chairman.

*Legislative Assembly Chambers,  
Sydney, February, 1857.*

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PROCEEDINGS OF THE COMMITTEE.

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THURSDAY, 11 DECEMBER, 1856.

**Members Present:—**

Mr. Flood,		Mr. Barker,
	Mr. Jones.	

Committee appointed Mr. Piddington to be their Chairman.  
Mr. Flood, in the absence of Mr. Piddington, was called to the Chair.  
Committee deliberated as to their course of Proceedings.

Motion made and *Question*—“That G. K. Mann, Esquire, Chief Commissioner of Railways, be summoned before this Committee, as a Witness, on Tuesday next, with instructions to bring with him the Plan of the originally proposed Railway Terminus at Newcastle, and that of the Terminus now proposed, together with any other Plans, Papers, &c., relating thereto”—*agreed to.*

[Adjourned till Tuesday next, at Eleven o'clock.]

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TUESDAY, 16 DECEMBER, 1856.

**Members Present:—**

W. R. Piddington, Esquire, in the Chair.		
Mr. Flood,		Mr. Weekes,
Mr. Jones,		Mr. F. T. Rusden,
	Mr. Buckley.	

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last meeting of the Committee.

Resolution of the House, appointing Committee, read by the Chairman.  
Committee deliberated.

Mr. G. K. Mann, Chief Commissioner of Railways, examined.  
[Adjourned till Thursday next, at Twelve o'clock.]

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THURSDAY, 18 DECEMBER, 1856.

**Members Present:—**

W. R. Piddington, Esquire, in the Chair.		
Mr. Jones,		Mr. F. T. Rusden,
Mr. Weekes,		Mr. Buckley.

Mr. E. O. Moriarty, Civil Engineer, examined.

Motion made and *Question*—“That Dr. Brookes, of Newcastle, be summoned before this Committee, as a Witness, for Friday, 2nd January”—*agreed to.*

[Adjourned till Friday, 2nd January, at Twelve o'clock.]

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FRIDAY, 2 JANUARY, 1857.

**Members Present:—**

W. R. Piddington, Esquire, in the Chair.		
Mr. Jones,		Mr. Weekes,
	Mr. F. T. Rusden.	

By direction of the Chairman, the Clerk read a letter from Dr. Brookes, requesting the Committee to excuse him from attendance before them, as a Witness, *this day.*

Committee deliberated.

Motion made and *Question*—“That Dr. Brookes be now summoned before this Committee, as a Witness, for Wednesday next”—*agreed to.*

[Adjourned till Wednesday next, at Twelve o'clock.]

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WEDNESDAY, 7 JANUARY, 1857.

**Members Present:—**

W. R. Piddington, Esquire, in the Chair.		
Mr. Flood,		Mr. F. T. Rusden,
Mr. Weekes,		Mr. Arnold,
	Mr. Buckley.	

Dr. Brookes, of Newcastle, examined.  
[Adjourned till to-morrow, at Eleven o'clock.]

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THURSDAY, 8 JANUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.

Mr. Flood,		Mr. Buckley,
Mr. Jones,		Mr. Arnold,
Mr. Weekes,		Mr. F. T. Rusden.

Mr. *William Crossdill*, of Newcastle, examined.  
[Adjourned till Wednesday next, at Eleven o'clock.]

WEDNESDAY, 14 JANUARY, 1857.

Members Present:—

Mr. Piddington, | Mr. Hay.

Mr. *J. Whitton*, Chief Engineer to the Railway Commissioners, was in attendance, as a Witness;—

But a Quorum of the Committee not being present,  
[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY, 20 JANUARY, 1857.

Members Present:—

Mr. Piddington, | Mr. Jones.

Mr. *J. Whitton*, and Mr. *W. Keene*, were in attendance as Witnesses;—

But a Quorum of the Committee not being present,  
[Adjourned till Friday next, at Eleven o'clock.]

FRIDAY, 23 JANUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.

Mr. Arnold,		Mr. Weekes,
Mr. Flood,		Mr. Barker,
Mr. Buckley,		Mr. Jones,
		Mr. F. T. Rusden.

Mr. *J. Whitton*, and Mr. *W. Keene*, who were summoned before the Committee, as Witnesses, for this day, being both present in the Room, and a Question arising, on the Chairman calling Mr. *Whitton* for the purpose of commencing his examination, as to the expediency, under the peculiar and conflicting nature of the Evidence given with respect to this inquiry, of permitting Mr. *Keene* to be present during the examination of Mr. *Whitton*,—Committee deliberated, and being of opinion, that it was unadvisable to permit Mr. *Keene's* presence during such examination,

The Chairman directed Mr. *Keene* to withdraw, and

Mr. *Keene* withdrew accordingly.

Mr. *J. Whitton*, Engineer-in-Chief, to the Railway Commissioners, then examined.

At the close of his examination, the Chairman directed Mr. *Whitton* to withdraw, and Mr. *Whitton* withdrew accordingly.

Mr. *William Keene*, Examiner of Coal Fields and Coal Mines, then examined.

[Adjourned till Wednesday next, at Eleven o'clock.]

WEDNESDAY, 28 JANUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.

Mr. Jones,		Mr. Barker,
Mr. Weekes,		Mr. Buckley,
Mr. Flood,		Mr. F. T. Rusden.

By direction of the Chairman, Resolution of the House referring to the Committee, on 23rd instant, a Petition from the Chairman, Deputy Chairman, and Committee of the Newcastle Chamber of Commerce, praying for certain extensions of the Hunter River Railway,—read by the Clerk.

Petition then read. (*Vide Appendix A.*)

Mr. *J. Brown*, ship owner of Newcastle, and Mr. *George Tully*, examined.

[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY,

TUESDAY, 3 FEBRUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.	
Mr. Arnold,	Mr. F. T. Rusden,
Mr. Gordon,	Mr. Buckley,
Mr. Barker,	

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous meetings of the Committee.

Mr. *Alexander Brown*, Manager of the Coal and Copper Company, and Mr. *M. Bell*, Engineer in the Hunter River Railway Department, examined.  
[Adjourned till Friday next, at Eleven o'clock.]

FRIDAY, 6 FEBRUARY, 1857.

By direction of the Chairman, the Meeting of the Committee to be holden *this day*, was postponed till Wednesday next, at Twelve o'clock.

WEDNESDAY, 11 FEBRUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.	
Mr. Jones,	Mr. F. T. Rusden,
Mr. Arnold.	

Mr. *A. W. Scott*, M. P., examined.

Committee deliberated respecting the tenor of their proposed Report.

Motion made (Mr. *Jones*) and *Question*,—"That the Chairman be requested to draft a series of Resolutions for the consideration of the Committee, such Resolutions, if agreed to, to form the basis of their Report"—*agreed to*.

[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY, 17 FEBRUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.	
Mr. Weekes,	Mr. Jones,
Mr. F. T. Rusden,	Mr. Buckley,
Mr. Arnold.	

The following Draft Resolutions, brought up by the *Chairman*, were read 1<sup>o</sup>:—

"1. That there is no evidence in possession of the Committee to justify the Government in expending the large sum of money necessary for the purpose of constructing a double line of Railway from Honeysuckle Point to Watt-street, as recently proposed by the Railway Commissioners; one for goods and passengers, and another upon framing, at an elevation of twenty feet above the road level, for the delivery of coal;—the estimated cost of both lines amounting to £70,000, exclusive of Rails."

"2. That a single line of Railway, for goods and passengers, from Honeysuckle Point to the Wharf at Watt-street, should be laid down in the most economical manner consistent with strength and sufficiency, and that the Railway buildings necessary at the Terminus at Watt-street, should be of the most inexpensive description."

"3. That, in the opinion of this Committee, the Harbour of Newcastle would be very greatly improved by the gradual construction of an embankment from the north end of Bullock Island to the neighbourhood of the A. A. Company's staiths. Your Committee believe that the ships entering the Port ought to be compelled, under penalty, to discharge ballast along a line, to be marked out by the Port Master, at Newcastle."

"4. That the gradual operation of this process would unquestionably reclaim a large breadth of the low land between the line of embankment and Bullock Island, and that, as the work proceeded, the land gradually recovered from shoal water might be sold by the Government, with the view to pay the current expenses of the undertaking, and thus ultimately secure the most ample wharf and shipping accommodation to the growing commerce of Newcastle; there being off Bullock Island a larger area of deep water than in any other portion of the harbour."

"5. That, as it is doubtful where the main Terminus at Newcastle will be ultimately fixed, the Committee are of opinion that it would be undesirable for the Government to take up more land at Honeysuckle Point than is strictly required for Railway purposes."

Motion made (Mr. *Jones*) and *Question*—"That these Resolutions be now read 2<sup>o</sup>, and considered *seriatim*"—*agreed to*.

*First Resolution* read.

Whereupon Committee *Resolved*:—

"That the purport of this Resolution be embodied in the Report."

*Second Resolution* read.

Motion made (Mr. *Weekes*) and *Question proposed*—"That this Resolution be amended by the omission of all the words after the word "That," at the commencement, "with

“ with a view to the insertion of the following words :—‘ the evidence of the various witnesses examined does not justify the adoption of so unusual a proceeding as running a Railroad on street level through the Town of Newcastle, to Watt-street, more especially when it is proposed that such Railroad should be fenced in with a close fence,—thus shutting out the inhabitants from all access to water frontage, whilst the accumulation of shipping at the proposed Terminus, which is at the mouth and narrowest part of the harbour, would inevitably tend to increase the difficulties to vessels entering thereinto’—instead thereof.”

Committee deliberated.

Question put—“ That the words proposed to be omitted stand part of the Resolution.”

Committee divided.

Ayes, 3.  
Mr. Buckley,  
Mr. Jones,  
Mr. F. T. Rusden.

Noes, 1.  
Mr. Weekes.

Whereupon Committee Resolved :—

“ That the purport of this Resolution be embodied in the Report.”

Third, Fourth, and Fifth Resolutions then read.

Whereupon Committee Resolved :—

“ That the purport of these Resolutions be embodied in the Report.”

Motion made (Mr. Jones) and Question—“ That the Chairman be now requested to prepare a Draft Report, embodying the purport of these Resolutions, for the consideration of the Committee”—*agreed to.*

[Adjourned till Friday next.]

FRIDAY, 20 FEBRUARY, 1857.

Members Present:—

W. R. Piddington, Esquire, in the Chair.

Mr. Weekes,  
Mr. Flood.  
Mr. Barker,

Mr. Arnold.

Mr. Buckley,  
Mr. Jones,  
Mr. F. T. Rusden,

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last meeting of the Committee.

By direction of the Chairman, Resolution of the House, referring to the Committee, on 18 instant, a Petition from certain Inhabitants of Newcastle and its Suburbs, in public meeting assembled, praying that Railway facilities may be afforded to the up-country districts before incurring the expense of establishing the Terminus of the Newcastle Railway at the Sand Hills, read.

Petition then read. (*Vide Appendix B.*)

Committee deliberated.

Motion made (Mr. Flood) and Question—“ That the Committee is of opinion that it is expedient to recommend the printing of this Petition, together with the one referred for their consideration on the 23rd ultimo, in an Appendix to their Report”—*agreed to.*

The Chairman then brought up, and laid before the Committee, a Draft Report.

Motion made and Question—“ That the Draft Report proposed by the Chairman be now read”—*agreed to.*

Report read accordingly.

Committee deliberated as to the advisability of inserting a paragraph at the end of the Draft Report, having reference to the two Petitions referred to them, and considered that the insertion of any such paragraph was unnecessary.

Whereupon Motion made and Question proposed—“ That this be the Report of the Committee ”

Committee divided.

Ayes, 5.  
Mr. Flood,  
Mr. Jones,  
Mr. Buckley,  
Mr. Barker,  
Mr. F. T. Rusden.

Noes, 2.  
Mr. Arnold,  
Mr. Weekes.

Chairman requested to Report to the House, together with the Minutes of Evidence.

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1856.

## NEW SOUTH WALES.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

## RAILWAY TERMINUS AT NEWCASTLE.

TUESDAY, 16 DECEMBER, 1856.

Present:—

MR. BUCKLEY,  
MR. FLOOD,  
MR. JONES,

MR. PIDDINGTON,  
MR. F. RUSDEN,  
MR. WEEKES.

W. R. PIDDINGTON, ESQUIRE, IN THE CHAIR.

Gother Kerr Mann, Esq., called in and examined:—

G. K. Mann,  
Esq.

1. *By the Chairman:* I believe you are one of the Railway Commissioners? I am the Chief Commissioner.

2. Can you inform the Committee where the Terminus of the Railway is situated—the exact position of the present Terminus? There is, in fact, no Terminus at present; the line extends on to Honeysuckle Point; it does not run on through Honeysuckle Point, on to the Australian Agricultural Company's land, but terminates short of it about forty or fifty yards.

3. Then I understand that the Railway Commissioners have not fixed upon any Terminus at present? The Railway Commissioners propose that the line should be extended through Newcastle, to land beyond Watt-street; and they have prepared plans and estimates in accordance with that proposition.

4. To what land beyond Watt-street? To Government land, at the foot of the sand hills, near where some old Government buildings exist.

5. How near is it to the breakwater? The eastern boundary of Watt-street is the western boundary of the Terminus.

6. It does not extend beyond Watt-street? A portion of it will extend beyond Watt-street; but the Station itself will be to the eastward of it.

7. The Station itself is fixed in Watt-street; what I wish to know is, the proposed extreme point of the Terminus? The line itself would run some considerable distance beyond the Station buildings. The extreme point of the permanent way, and the arrangements for the coal traffic, will probably extend beyond those for the passenger traffic; the former would terminate, at present, at that portion of the wharf where the sheep and cattle are shipped.

8. Then the eastern side of Watt-street will, in reality, be the Terminus of the Railway? You may call the whole of that part of the ground the Terminus.

9. But merely for the purpose of convenience? Excuse me—if you would call the whole of that land the terminal station; the station itself cannot be defined to so near a point; it will extend over a considerable area.

10. Is the present proposed Terminus at Watt-street the original Terminus agreed upon? The idea originally, when first I joined the Commission, and which I believe was the intention of the Company, though it was not matured, was to have formed station arrangements at Honeysuckle Point; the Company proclaimed a large area of land there for that purpose.

11. If the proposed line along the edge of the harbour to Watt-street is finally fixed upon, will not that line very much interfere with the convenience of the inhabitants of Newcastle, by intersecting the various streets, which I believe all run from north to south? I do not think it will.

12. In what manner do the Commissioners propose to construct the line—upon embankments, arches, or piles? The proposition they design to carry out is, that the passenger traffic shall be upon the general level; the arrangement for the coals will be at an elevation of from one



G. K. Mann,  
Esq.420  
16 Dec., 1856.

to two and twenty feet above the level, upon framing. It is necessary that the coal traffic should be delivered at that elevation; the arrangements for the staiths require it.

13. Then the passenger traffic will be conducted upon the level of the land? Upon the present general level of the Railway.

14. That, perhaps, will necessitate an embankment, but not very high? Yes, the general level.

15. If embankment is necessary for the purposes of passenger traffic, will not that interfere with the convenience of the inhabitants, by cutting them off from the harbour? No; the embankments will not be above their level, or the level that the wharf will have to be made up to; and the coal traffic, upon which there would be the greatest amount of daily or constant traffic going on, will be at such an elevation that the town will have free access under it to the wharf. As regards the passenger traffic—it will be only at stated periods that the trains will pass during the day, and being on the general level, can easily be crossed at other times.

16. Notwithstanding that the passenger traffic will be that which will the least interfere with the traffic of the inhabitants, still, as the city is now built, I presume that parties having to go to the harbour will have to cross the Railway? Yes.

17. To that extent, will it not interfere with the convenience of the inhabitants? I do not see how it can be inconvenient when the trains are not running; it will only be at stated periods, for a few minutes, that the Railway crossings would be shut off to the town, and the Railway opened for the passage of the train.

18. Unless it be absolutely necessary that the line of Railway should intersect, as this must do, the entire line of streets of the town, is it not desirable to avoid any danger that may possibly be incurred by passengers or persons crossing the various lines of streets to the harbour, at the time when a passenger train was passing? For that time the street would be necessarily shut off, until the train had passed.

19. It would be shut off by an iron rail? No; it would be shut off by an arrangement of the gates. These are so arranged, that when the train is passing, or about to pass, they shut off the crossing from the Railway; and when the train has passed, they cross the Railway, and prevent passengers from going on to other portions of the line.

20. Will the whole of the proposed line towards Watt-street be fenced in? It will all be fenced in—entirely fenced in.

21. Will not that of itself be an impediment to free communication with the harbour? Not at all; the fences would not be carried across the lower crossings; the lower crossings would be protected by gateways, as I have stated.

22. By the lower crossings, you mean the terminus to the street? The lower crossings will be the prolongation of the street to the wharf.

23. Are you acquainted with the capacity of the harbour at Newcastle for the accommodation of shipping in the immediate vicinity of Watt-street, and opposite Watt-street? Do you allude to its area or to its depth of water?

24. To its area—to the harbour accommodation? I have not gone into that point. I have considered more the depth of the water. I do not know the number of vessels the harbour would accommodate.

25. Should it be found that at that particular part the harbour accommodation is more limited than at any other part, would not that in itself be an objection? There will be no more vessels there at one time when the Railway is there than at present. In fact, they will not be detained alongside the wharf so long as at present.

26. Is it not reasonable to suppose that when this Railway shall be completed and in working order, that it will increase the commerce of Newcastle? I anticipate it will, to a very great extent; but if that is found to be the case, the wharf accommodation can also be increased. It can be carried out as far as the Breakwater, if necessary—the whole sweep. The line proposed for the improvement of the harbour by Mr. Moriarty has been followed in the plans, and that sweep could be carried on to meet the Breakwater.

27. I do not doubt, in any way, what you state with regard to the extent of wharf accommodation simply, but my question goes to the area of harbour accommodation, not to the possibility of extending the line of wharf accommodation; and upon that I understand you are not in a position to inform the Committee? I am not.

28. You also state that no greater number of ships will be likely to enter the port of Newcastle when the Railway shall be completed than enter now? I beg pardon, I did not say that; I meant to say that I did not think that portion of the harbour would be more obstructed in consequence of Railway traffic than it is at present, on account of the extra rapidity with which vessels will be loaded from the more complete arrangements for delivering goods and coals.

29. Is it not natural to suppose, and is not that supposition confirmed by experience, that wherever a Railway Terminus is fixed, to that point all traffic is concentrated? Then it would be necessary to extend the wharf frontage.

30. My questions are directed more with reference to harbour accommodation, with the view of learning from yourself, if you can inform the Committee, whether the proposed Terminus will or will not concentrate the traffic, the presumed and expected traffic of Newcastle, at the point where the Terminus is fixed? No doubt.

31. If it does concentrate the traffic at that point, the number of ships at that point will necessarily have a tendency to increase? We hope so, but under any arrangement we can only take a limited number of ships alongside the wharf, the others must haul off into the stream until they can come alongside the staiths to load. Under such circumstances, I do not think the objection to that point could be greater than it is at present. There is no doubt that the general obstruction of the harbour by the increase of traffic must be expected.

32. Have you never heard of collisions even now between steamers and merchant vessels in the

the

the immediate neighbourhood of the proposed Terminus at Watt-street? I do not remember. G. K. Mann, Esq.

33. If any other portion of the harbour of Newcastle can be pointed out where the harbour accommodation is very much more extensive than in the neighbourhood of Watt-street, would not that of itself be a reason why that part of the harbour should be fixed upon in preference to another part where the harbour is less extensive? If equally accessible, it would certainly be a reason why it should. 16 Dec., 1856.

34. Have you ever contemplated a place called Bullock Island with respect to its eligibility as a Terminus for the Newcastle Railway? I cannot say I have ever contemplated it as a Terminus, but I have had it examined merely to satisfy myself about it; in fact, that I might leave no point unturned in settling this question, which I considered a momentous one. Bullock Island, I found to be altogether inapplicable; it would entail an enormous outlay, even supposing the Railway had not already been carried into the town. The whole level of Bullock Island, according to surveys which were made, is some four or five feet under the level of our line, and to make a Terminus where the surface would have to be raised to that height would, I think, be most objectionable. Besides, it would be necessary to have an extensive jetty from the main to the Bullock Island, and also an extensive jetty to reach into deep water. These two jetties together would be equal to nearly three-quarters of a mile; and if these had been completed, there would be no possibility of extending the accommodation as the traffic increased, without a further enormous expenditure for jetties. Also, in an engineering point of view, it is very doubtful how these jetties, if carried out, would affect the harbour of Newcastle; in fact, it is a question with me whether they would stand there at all.

35. You are acquainted, I suppose, with a place called Honeysuckle Point, near the Australian Agricultural Company's coal establishments and coal shoots? Yes; I know them well.

36. Would it not be possible, by piling or otherwise, to reclaim a considerable portion of what is now scarcely more than a swamp, between the coal-shoots and Bullock Island? It would be possible, but the expense would be something enormous.

37. The expense of the embankment from Honeysuckle Point to the end of Bullock Island? Yes; the piling itself would amount to a very considerable sum, and as to reclaiming the land, if it were done at once, it would be almost impossible to estimate the expense, but it would be something enormous. If it were left to be done gradually, the work must extend over some period of years before any area was reclaimed, and then it would be a question how far it would affect the harbour of Newcastle. It is a very dangerous thing to meddle with the waters of a tidal river.

38. Is it your opinion that this would affect the tidal waters? It is difficult to say.

39. Have you considered the subject—can you give a decided opinion that it would interfere with the tidal waters? I think it would.

40. Have you any idea of the expense of an embankment from the coal-shoot to the north end of Bullock Island? I have not made any estimate, and, in fact, I never contemplated making any estimate of the sort; but from the experience I have had in these works I believe that the cost of such a work would be something enormous—that really the advantage gained would not compensate for the outlay for years to come, even if it did then.

41. Do you limit your opinion to the reclamation of the entire surface of the ground, or to the expense of the embankment from the coal-shoots to the northern point of Bullock Island? I would combine both. The embankment would have to be the first work necessary to be done, and that, in itself, would be a work of considerable magnitude.

42. Have you any idea of the value of land at Bullock Island, or in the immediate neighbourhood? I have not.

43. Have you any idea of the acreage that might be reclaimed if the proposed embankment from the coal-shoots to the northern point of the island were carried out? I have not, but it is something very considerable.

44. Taking it for granted that it would reclaim a space of land equal to 640 acres, do you not think such a vast extent of valuable land, in the immediate neighbourhood of Newcastle, available for purposes of repayment—do you not think the sale of that land alone would be sufficient to reimburse any outlay? It might; but these are subjects that I did not consider, and upon which I hardly came prepared to give an opinion. It is probable, from the value of land at Newcastle, at the price it has lately been selling, that it might be a profitable speculation, but I have not considered that at all in connexion with the Railway works or the Railway Terminus.

45. I think you have not expressed a positive opinion as to whether that proposed embankment would in reality interfere injuriously with the current of the Hunter River? No; I am not prepared to express a positive opinion at present without going into the subject. It would be necessary that I should observe the set of the waters up the river, the general tidal set, before I could express an opinion.

46. *By Mr. Flood:* How long have you filled your office of Chief Commissioner of Railways? Somewhere about a year; a little more.

47. When you entered upon office did you find any plans in reference to the Railroad at Newcastle, including the Terminus? We had plans with reference to the Railroad, but we had no definite plan or arrangement with reference to the Terminus.

48. No definite plans? There were a number of suggestions and propositions with reference to the Terminus, and I believe there were sketches by different parties, and among others one for running out a jetty from Honeysuckle Point.

49. Was not that jetty commenced with the intention of making the Terminus at Honeysuckle Point? It never was commenced; nothing has been done to it.

50. I suppose you have never made a calculation as to the cost of a Terminus or chief station at Honeysuckle Point? Calculations for an approximate estimate were gone into, and I found

G. K. Mann, Esq., found a sum upon the Estimates for the erection of that jetty of £37,500; but from the rough estimates I have made I am thoroughly convinced that amount never would have built the jetty.

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51. That was the estimate you found in the office? That was put upon the Estimates of Expenditure to, and voted by the Legislature; it was put down as an approximate sum.

52. Was there any charge expected to be made upon the public in addition to the cost of construction of the jetty? Compensation for land at Honeysuckle Point, and the station arrangements.

53. Do you know what was the amount of compensation sought? There were very considerable land claims for Honeysuckle Point. There were twenty-two acres there, and the original claim by the trustees for this, I think, was £1,500 an acre; an application was afterwards made to the Commissioners to revise their claim, and to put it down at £2,000 an acre, which the Commissioners refused. When the land was taken possession of by the Company originally it was found to be in possession of numerous tenants; these tenants sent in a claim, in the aggregate amounting to, I think, £38,000, in addition to the claim made by the trustees.

54. Who are the trustees to whom you allude? Mr. Scott and Mr. Croasdail.

55. To what estate are they trustees? I think it was land purchased for some church or school, purchased by a society.

56. These gentlemen have no other interest than as trustees? No, I believe not. I will just proceed, if you please, to state how that claim stands; it is very complicated, and it has been impossible hitherto to arrange it. The tenants were found in possession, and when their claims were looked into, it was found that they had no legal title, or that their legal title was disputed. I understand that they had none. The Commissioners then proposed to treat with the trustees, in the first instance, leaving it to the trustees to settle with the tenants; but the trustees, as I understood, refused to acknowledge the title of the tenants. Subsequently, I believe, there was a proposition made by the trustees, on condition that they should receive £2,000 an acre for the land, that they would make some arrangement with the tenants.

57. *By Mr. Jones:* As between the trustees and the tenants? As between the trustees and the tenants; but there was another difficulty, arising from one of the trustees declining to act.

58. *By Mr. Flood:* Then, altogether, the amount would be about £70,000; the amount of claims made by both trustees and tenants? It would be fully £70,000 for twenty-two acres of land.

59. That, in addition to the £37,500, the cost of the jetty, would be upwards of £100,000? Yes, and that £37,500 would not include any station or arrangement further than the jetty.

60. Merely for the construction of the jetty, without buildings or staiths? Yes, or permanent way, or coal arrangements, or staiths at the end of it.

61. What distance is Honeysuckle Point from the Terminus, or site for the Terminus, which has been adopted since you have been in the office? I think about a mile. (*The witness produced a plan, and pointed out the course of the Railway.*)

62. Will this proposed line interfere with private property from Honeysuckle Point to Watt-street? The only parts are the Australian Agricultural Company's property, and I think they are willing to give it to us on favourable terms, and the allotments between Perkins-street and the Bank of Australasia. These allotments are not built upon or fenced in.

63. Will you state what it will cost the public to resume these lands you speak of, the allotments as well as the Company's land? I cannot.

64. You state that you believe the Agricultural Company will allow the Commissioners to take the land on favourable terms? I am under that impression.

65. Can you state what those terms are? No; there are no terms in existence at the present moment.

66. These are the only lands the public will be required to purchase? That is all; all the rest is Government property.

67. Can you inform the Committee the cost of the proposed line from Honeysuckle Point to the proposed Terminus in Watt-street? Yes; the works here are estimated at about £70,000, from the present termination of the Railway to Watt-street.

68. Does that merely include the permanent way and the embankment? It merely includes the work; it does not include the iron.

69. It is exclusive of the rails? Yes.

70. There is no other iron than the rails? The rails and turn-tables, &c.

71. It is for the embankment, the permanent way, and the sleepers, but does not include the iron? Just so.

72. *By Mr. Jones:* It includes all the permanent way except the rails? Yes.

73. *By Mr. Weekes:* What portion of that will be for the station buildings? About £18,000; by this plan the passenger arrangement will cost about £25,000, and the coal arrangement about £40,000. I have said the stations would cost about £18,000, but there is a sum of £2,511 for a stopping station at the end of the line near Honeysuckle Point. It is desirable to stop there to take tickets and also to take up passengers.

74. Will you hand in the estimate you have now before you? I am hardly in a position to do so, as it is now before the Government, but I can give you the amount.

75. *By Mr. Flood:* The £70,000 you have mentioned, does that include any work for a wharf, if that might be required? Yes, it includes a portion of the wharf opposite Watt-street.

76. Will that include the necessary shoots for loading vessels? It includes the arrangements for two extensive shoots.

77. Will that afford ample accommodation for the number of vessels that are in the habit of trading to Newcastle? According to the present trade I think it will.

78. Is not the point in question, opposite Watt-street, particularly limited for ship accommodation? The channel is confined, but the vessels will be loaded much more quickly than at present. We expect to load a three-hundred ton ship in a tide. Now there is no other place in the harbour where a ship of that size can load alongside a wharf; they are obliged to take in their coals by lighterage.

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79. Can a ship swing from the wharf clear of the sandbank? Yes, she can haul out from that easily.

80. Is there room for a ship to swing lying at anchor in the channel? I do not think ships anchor there.

81. Is there room for a ship to swing? I am not aware.

82. Is it not the fact that the channel is particularly contracted at that point? Yes, there is a horse-shoe shoal that closes up the harbour considerably.

83. I would like to know if you can give the Committee the probable cost, in addition to the amount of £70,000 you have already given, of the iron work you allude to, including the turn-tables? I cannot now, but I can fill the cost in when I have my evidence for revision.—About £5,000.

84. I suppose there is no possibility of the city of Newcastle extending to the eastward of Watt-street to any great extent? It cannot extend much unless a great portion of the land below the sand hill be reclaimed; it can extend in this way for some distance.

85. Do you not think it would be desirable to retain that as a place for a public promenade for the health of the inhabitants? I think there are much better spots for that purpose.

86. At all events the area is very limited in that direction between Watt-street and the sea? No, there is a considerable area; the breakwater runs out some distance.

87. How many acres do you suppose you have there? Seventy or eighty acres might easily be reclaimed there.

88. Do you not think the town is more likely to increase ten or twenty-fold to the west of the present boundary of Newcastle, rather than to the east of Watt-street? It is probable that it may, but the shipping and the goods traffic must necessarily be down at that end of the town, for that is the only part where there is sufficient depth of water to get up to the wharf.

89. Has not the population of the suburbs immediately adjoining Newcastle increased considerably within the last two years? I have understood that it has.

90. Do you not think that by having a Terminus at the extreme end of Newcastle it will be a great inconvenience to the inhabitants both in the city and suburbs, as they will have to cart all their goods to the Terminus at Watt-street? They need not cart them; we propose to meet that by our arrangement for passenger traffic, at Honeysuckle Point. There will be a goods arrangement at the same point, if necessary.

91. Then you propose to have a Terminus at Honeysuckle Point? No, a small stopping station.

92. Will not that create great inconvenience as well as delay to stop the trains there? No, quite the contrary; it is for the extra convenience it is done. If the Terminus were at Honeysuckle Point it would be desirable to have a small stopping station further down the line.

93. Is it the object of Government to have a station for the purpose of receiving goods upon the line merely to take them a mile? That station is proposed merely as a passenger station at present; the goods station will be at Watt-street, where the steamers will deliver them, and where they must be shipped, but goods could be picked up at Honeysuckle Point.

94. Whose design is this that the Terminus should be at the east side of Watt-street—is it a site of your own? The design has been drawn out by Mr. Bell, the engineer of the line. The proposition of carrying it through was arrived at after every careful and mature consideration on the part of the Commissioners, and I believe they are unanimous, indeed I know they are, as to the necessity of adopting the present site.

95. I think you stated that Bullock Island is four or five feet below the level of the permanent way? Yes, below the permanent way; that is according to my present information.

96. For the purpose of coal traffic it would be necessary to elevate the staiths? Yes; they will have to be placed twenty feet above the delivery.

97. Bullock Island being four or five feet lower than the permanent way, it will put you to the additional expense of raising your staiths, supposing you adopted that as the site for loading ships? The same remark applies to the whole of this level—the remark that I previously made with regard to the applicability of Bullock Island as a site for a station. What I said, or meant to say, was, that it would involve the necessity of bringing up the entire level of our station ground to the level of our line. Under any circumstances our coal delivery will require to be elevated.

98. Then it is not the amount of the various sums that have been demanded by individuals that have caused the Government to adopt the present site? The expense of the land has had its due weight with the Commissioners, but had that been the most eligible spot for the coal arrangements, there is no doubt that the Government would have been justified in paying a larger compensation, if necessary.

99. *By Mr. Jones:* When you entered on your duties as Chief Commissioner of Railways, what did you understand to be the intention of the Railway authorities in reference to the Terminus of the Newcastle Railway? There was no decided intention, in fact, it was quite undecided—quite unsettled—an open question. The original intention of the Company was, no doubt, to have made the Terminus at Honeysuckle Point. It must have been so, or the land would never have been proclaimed or taken; the land must have been taken by the Company with the express intention of forming a Terminus there; but I think it must have been done, in fact, it is very evident it was done, without mature and careful consideration of the locality.

100. Have you found that a common feature in the mode in which the railroad works have been carried on in this Colony—that land has been taken possession of, and arrangements have

G. K. Mann, have been made, without the plans having been matured. No; this is the only instance of consequence that has yet occurred, where any land has been taken and it has been afterwards considered advisable to recommend that it should be relinquished again.

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101. You had, as I understand, some estimates of the probable expense of carrying out the jetty into deep water at Honeysuckle Point? Yes, for the purpose of landing goods and passengers, and the delivery of merchandize, coals, and other goods, to the shipping in the harbour.

102. In deep water? In deep water.

103. As I understand, there was a line of Railway to run along this jetty? Yes.

104. The probable expense of making this jetty was estimated at £37,500? Yes; a sum of £37,500 was placed upon the Estimates and voted for the work, but I am of opinion that sum would not have been sufficient.

105. What was it supposed this £37,500 would construct? That it would construct the timber work of the jetty.

106. Did you assume that it would not have included the cost of laying the lines along this jetty? It could not have included it; it could only have included the timber-work.

107. What would have been the length of the railroad from the point at which the Railway has now arrived to the extreme end of the proposed jetty? The jetty itself would have been three-quarters of a mile long.

108. From the point at which the Railway has now arrived to the point from which the jetty would have started, what would have been the distance? The whole distance would have been upwards of a mile to the end of the jetty.

109. What is the distance from this same point to the Terminus proposed at Watt-street? Just a mile.

110. Then, in point of fact, the length of the Railway would be equal in both cases? Yes, nearly.

111. But in one case it would be carried through much along the same level as the high road—? The formation would be upon the level of the high road.

112. In the same direction? In the same direction.

113. While in the other case it would have taken a curve from the main line of the road to a portion of Honeysuckle Point, and from that, by means of a jetty, to deep water? Yes.

114. The length, in both cases, would be about the same? Yes; the jetty would involve a separate locomotive arrangement for passengers and goods, because it could not have been worked by the ordinary engine and carriages of the line. It would have been very injudicious to work along the jetty with a heavy engine and the ordinary carriages. It would have been absolutely necessary to have made a separate locomotive arrangement, on account of the distance from the station.

115. Can you state what would have been the total cost of that mile of Railway to the extreme point? I think no clear and definite estimate was ever made of the cost of that work.

116. You cannot put the Committee in a position to judge what would have been the relative cost of making this mile of Railway, including the jetty, as compared with the cost of making the mile of Railway now estimated for, ending at Watt-street? I can not; but I am prepared to say that it would have been much more expensive than the line now proposed. Besides it is very doubtful whether the jetty would have stood after it had been constructed.

117. Did I understand you to say that the claims sent in by the tenants and trustees for land taken at Honeysuckle Point, amount to a sum of from £40,000 to £70,000,—that is, that in one case, according to the original claim, the trustees required £44,000, and the tenants £23,000, making together £67,000? The first claim of the trustees was £33,000 and of the tenants £38,000; the second claim of the trustees was £44,000.

118. And that subsequently a proposition was submitted by the trustees, claiming £2,000 an acre, at the same time stating, if that were granted, they would undertake to arrange with the tenants? Yes; I believe that was the object of their request—to be allowed to amend their claim. It is very doubtful whether the terms of the application of the trustees to augment their claim would have relieved the Commissioners from any claim the tenants might have against them; in fact, the increased claim of the trustees appears to be based upon the fact of the enhanced value of the land to them, consequent on the tenants not being able to establish their title.

119. The claim in the one case would have involved a payment of £67,000, and in the other of £44,000? Yes; if the trustees settled with the tenants.

120. Can you inform the Committee whether the amounts which would be claimable for the land through which the line is now intended to run, would amount to so great a sum as £44,000 or £67,000? The land required along this line is so trifling, compared with the area of Honeysuckle Point, that I conceive it would not approximate to the lowest amount. The only land we take is a small portion of this allotment here (*pointing to the plan*), for widening the street, and a small portion from the Australian Agricultural Company.

121. Do I understand that the Commissioners have departed from the intention originally formed by them of constructing the Terminus at Honeysuckle Point, on the ground that the cost of extension to Watt-street will not be so great as the cost of forming a termination here; and also, because the claims for compensation along the now proposed line will not be so great as if the original intention were carried out, and further for the purpose of giving greater convenience for the shipment of passengers and traffic? The first consideration was, which was the best site for terminal arrangements, and this point (Watt-street) was found, on due consideration, to be the best. The heavy claim from the trustees weighed considerably with the Commissioners in arriving at the decision; indeed it is probable that had that land been procurable at a reasonable rate this design might have been modified. Repairing shops and large establishments for various purposes might very well have been there, as it is not absolutely necessary that they should be at the extremity of the line; it is sufficient if they

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are in the vicinity of it. If the land had been procurable at Honeysuckle Point I conceive that some arrangement of that kind might probably have been proposed; but the whole of the land in the neighbourhood of Watt-street belonging to Government, that point was at once decided.

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122. For the purpose of receiving or delivering goods, would not the original design have been much more convenient; I mean as regards the extent of deep water that would have been available off the jetty at Honeysuckle Point as compared with the extent of deep water at the point now proposed? Quite the contrary; at the jetty it would have been very limited indeed, and there would have been no means of extending that accommodation as the traffic increased, without a considerable outlay in adding to the jetty, and piling and building at a vast expense, at its extremity.

123. Would there not have been a much greater expanse of deep water at, and adjacent to, the jetty as compared with the expanse of deep water off the wharf at Watt-street? The expanse of deep water in that place was rather objectionable. In fact it was one of the objections to the head of the jetty being out there. Heavy vessels are necessarily obliged to come alongside the wharf without any ballasting, to receive coals, and sometimes, I believe, it would be impossible for them to have warped alongside the jetty in that open bay. At the entrance of the river where the jetty would have been, they would have been exposed to the winds so much that I doubt whether they could have come across without their ballast.

124. Are you well acquainted with the portion of the harbour that lies off the now proposed Terminus? Yes; we have examined it carefully along the line of proposed wharf.

125. Is not the deep channel between that point and the point of Horse-shoe Spit, which lies in the middle of Newcastle Harbour, of very limited extent? It is very narrow.

126. Is it not a natural presumption, that while the whole of the goods, including the coals, are shipped there, there will always be a considerable number of vessels lying there? Yes; but I should remark that this is not the main channel of the river.

127. But it is the main channel by which vessels come up to take their cargoes in at the Port of Newcastle? They would take their cargoes in at the Railway stations; it would be merely small vessels that would require to pass up here. The Australian Agricultural Company have already made overtures to us for the delivering the whole of their coals, so that that will do away with their staiths altogether.

128. Would there actually be room for the number of vessels that would come for coals, to lie in and about the proposed Terminus? In the vicinity of it, I presume, they would lie across, as they do at present. I presume that to be as deep and as advantageous a part of the harbour as any, and, in fact, at present the heavy vessels lie out here, and the coals are taken off to them by lighters. By the proposed arrangement heavy vessels could come alongside, and be loaded direct from the shoot.

129. In regard to the coal and passenger lines, of which you have spoken, is it intended to construct common lines of Railway from near Honeysuckle Point? Yes.

130. There will then be on the present level a passenger and goods' line? Yes.

131. And from that point, or thereabout, there will be a coal line, which will rise on an inclination to a height of about twenty feet above the ordinary line? Yes.

132. And that upper line will be carried along to the Terminus at Watt-street? To the Terminus at Watt-street.

133. With a view to the delivery of coals by the staith into the vessels? Yes.

134. And the cost of the upper line, roughly estimated, will be somewhere about £40,000, without the rails? Yes.

135. The cost of the lower line, for passengers and goods, will be about £30,000? Yes.

136. Whence do you expect to derive your traffic for this coal line of the Railway? We know of one line, from the proprietor of which we have received communications, Mr. Eales, of Minmi; he proposed to come upon our line. The Agricultural Company have also communicated with us, and we expect some direct official communication upon the point, proposing that we should take the delivery of their coal. We have also had indirect overtures from the Coal and Copper Company, and there is a proposed arrangement for bringing their line upon ours. It is, besides, imagined that other mines will be opened, and we anticipate that Mr. Scott will give us some considerable traffic.

137. You are of course aware that the Australian Agricultural Company have already their arrangements complete for the delivery of their coal by means of their tramway to their staith in the harbour? Yes.

138. You are also aware that the Newcastle Coal and Copper Company have similar arrangements for the delivery of their coals at their staith? Yes, they have temporary arrangements; they cannot be considered as permanent.

139. What advantage would they gain by going on to your line, and giving up their present arrangement—what inducement would they have to give you a consideration, as I presume they would have to do, for the use of your Railway? The Agricultural Company are obliged now to load vessels by lighters out here, owing to their not having a sufficient depth of water at their staith to load vessels of any considerable tonnage—in fact their arrangements are so imperfect that they can only be considered as temporary. It takes them more time to load vessels now than it would do under our more perfect arrangements, and I conceive that it is within the power of the Government to prevent the Coal and Copper Company using their present staiths; they are now there only upon sufferance; and they are in the same position as to depth of water. They occupy a wharf that they do not expect to be able to retain, unless they pay for it to the Government, or make some arrangement respecting it. They therefore contemplate our picking up their coals and delivering them, and they have made overtures to us to take the haulage from the mines. If we pick up their coals we shall be able to deliver them at the works at a cheaper rate than the cost to them at present. The Company

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G. K. Mann, is now at great expense after bringing the coals to the wharf, in delivering them; they have to keep up a large establishment for that purpose, at considerable cost.

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16 Dec., 1856. 140. Your arrangement would be a cheaper and better arrangement to the Company if you undertook the delivery than the present? Yes.

141. Do I understand you to imply that the Government would be in a position, and would be justified to some extent, to compel them to have recourse to the Railway, by withdrawing their sufferance? I believe so; I have had no communication of the sort from the Government, but I have heard it spoken of as the intention of Government that those who retained the wharfs should pay rent for them. The Agricultural Company have directly stated that they are anxious to do away with their staiths and to come upon our line.

142. Have you made any very careful estimates of the probable cost of the two lines of Railway, the general and the coal line? Yes.

143. Sufficiently careful to justify you in laying them before the Assembly, as the data for a vote for completing the lines? Yes, for completing them to the present proposed extent. If the traffic should increase hereafter, it may be necessary to add to them.

144. Do I understand these lines to be single or double? Single; there are a number of sidings and lay-bys for the coal that is brought in.

145. *By Mr. Weekes*: Is it not a very unusual thing to run a Railroad on a level along the whole water frontage of a town—do you know an instance where the entire water frontage of a town is in a measure cut off by a Railway running on the road-level? I do not know an instance, but—

146. Would you not think it very undesirable and inexpedient, except for some very strong special reasons? I think it is very desirable that a Railroad should be as much to itself as it possibly can be, but I do not think that any great amount of inconvenience could be felt in this particular instance.

147. Do you not think it liable to place the lives of the inhabitants—children, and others—in jeopardy, from the easy access to the line, the line being open to the road at various hours? I think not; near the station there will be such a perfect look-out, and the line will be so completely and thoroughly fenced in throughout the town, as effectually to prevent danger.

148. But when the coal line is in operation, then, I understand you, that the gates of this lower line will be open? No; I said the line would be shut off. The coal line might remain open, for it will be twenty feet above the level; but on the passenger line the streets will be shut off when a passenger train is about to pass, and the crossings to the wharfs will be opened when it has passed.

149. Do you not think there would be great danger of children straying on to the line during the time the gates were open? No; I do not think so.

150. Not in a town full of inhabitants, where there was nothing to keep them off the rail? But they would be kept off the rail, by the rail being fenced off; the rail will never be open to the public.

151. I thought you said there were side gates? When the gates are closed across the street the rail is open, but when the crossing is open the gates close across the rail.

152. Then there is no possibility of getting on the rail except by getting over the fence? There is not without getting over the fence purposely, and near the station the arrangements are more complete and a more perfect look-out is kept; the train would run so cautiously through the town, any obstacle would be seen, especially as the line is straight.

153. Do you think after a town has been laid out by the Government as this has, with water frontage, although that water frontage is not sold, that it is any breach of faith with the parties who have bought land in the streets leading to the water to construct a railway which intercepts access to it? Quite the contrary; I should say it was anything but a breach of faith, as no doubt the Terminus would add considerably to the value of property in the Town of Newcastle.

154. Do you believe that the placing of the Terminus at the now proposed site tends to enhance the value of property in Newcastle more than the fixing the Terminus at Honeysuckle Point? I think it does; it will be the means of reclaiming land and adding considerably to the accommodation of the town here, by forming water frontage to a portion of the harbour which the town at present derives no benefit whatever from.

155. *By Mr. Flood*: It is the most exposed part of the harbour at that point, is it not? It is perfectly secure for shipping; it is the only part of the harbour where vessels can lie. They now lie out in the harbour there, and receive coals from lighters.

156. *By Mr. Buckley*: How far is the place where the steamers take in their coals from Watt-street, the present proposed Terminus of the Railroad? I believe the majority of the steamers take in their coals at the Agricultural Company's Shoot here—that would be about half a mile.

157. Would they have the same facility for swinging at the Watt-street Terminus as they would have at the other? I believe they would have considerably greater facilities.

158. More water than they have where they at present take in coals? Yes, deeper water.

159. What effect would it have upon the traffic of the Railway to have a Terminus at Honeysuckle Point—would it have a good or bad effect? I do not see how a Terminus is to be made at Honeysuckle Point.

160. You stated that you do not consider if the work were constructed at Honeysuckle Point it would be lasting? I do not think the jetty would.

161. Why do you think it would not? Because it would run out into deep water where there would be a strong set of the tide; it would have to go over a sand bank, which probably may be a portion of it quick sand.

162. Piling you think would not be substantial or secure? I think it is very doubtful.

163. Would the vessels incur considerable risk in warping alongside a wharf of that sort? I think it might be attended with considerable danger.

164. Would vessels require to have anchors in addition to a warp? I think it would require anchors, steam-tugs, and warps. G. K. Mann, Esq.,
165. Is the effect of the tide very great at that point? Yes, very great, indeed.
166. Have you any idea of the rate at which the tide runs at that point? I do not know the rate, but it is very strong, part of the tide. 16 Dec., 1856.
167. If the Agricultural Company were to do away with their staith, do you think the steamers would have greater facilities for getting their coals in either for the Hunter River or for Moreton Bay? Yes.
168. Is there more room to swing at the one place than at the other? I think there is more at Watt-street than at the other place.
169. What sized vessels can take in coals at the present staith? I think a vessel can take in from 150 to 200 tons. I think 200 tons is in excess of what they can take; for when vessels have taken in that quantity they haul off from the wharf, and the remainder is taken to them by lighters.
170. Do you know the tonnage of the "Boomerang"? No. I am talking of vessels trading to Newcastle for coals.
171. Supposing the "Boomerang" to be 400 tons burden, and to draw from ten feet to ten feet six water, could she load there? I am not prepared to say, but what I allude to more particularly is the fact, that no heavy vessels trading there for coal, and there are some of 500 tons, can take in all their coals at this staith. Whether a steamer of the draft you mention could take in coal there I am not prepared to say at the present moment.
172. Do you think she could come at any time of the tide to the Terminus you propose, and take in coal? It is a portion of the arrangement that she should be able to do so.
173. You are aware that there is a considerable embankment constantly forming at the wharf by the dropping of coals when vessels are being loaded? I am aware that there is a bank there, but I am not aware that it has been formed in that way. The vessels cannot continue up the river by this channel; they are obliged to come back and find their way round by the opposite shore.
174. Supposing the Railway completed, and that coals were delivered there, would it be possible to avoid that—do you think arrangements could be made to avoid the possibility of coals falling into the water, and forming a bank by the wharf? We propose to make our arrangements so perfect, as to reduce that evil to the minimum.
175. You conclude that, instead of having a Terminus at Honeysuckle Point, as originally proposed, a considerable saving would be effected by having it, as now proposed, at Watt-street? Yes.
176. With regard to its effect upon trade, do you think it will increase and facilitate the traffic? Yes; if the proposed Terminus at Honeysuckle Point were carried out, it will eventually be necessary to carry out this plan, and to bring the goods' traffic and goods' arrangement through the town, for sea-going vessels must necessarily deliver their goods at this portion of the town, near Watt-street, and they must then either be carted to Honeysuckle Point, or a line must be laid down.
177. In your opinion, there would be sufficient traffic, by combining goods and passengers, to render a line advantageous there? Yes, I am very sanguine as to that.
178. You think it much more likely to pay by the present proposed construction than if it terminated at Honeysuckle Point? The line is without a Terminus at the present moment, and this arrangement is absolutely necessary for the completion of the line; the terminal arrangement must be made somewhere before the line can be thoroughly and properly worked; and this terminal arrangement I believe to be the cheapest and best.
179. What was the object of naming Bullock Island as a proper place for a Terminus? I do not know; it was suggested at one time; in fact, the difficulty of fixing upon a Terminus led to the naming of different points.
180. What is the nature of the arrangements of the Australian Agricultural Company for the delivery of coal? They have two staiths there, where they have delivered coal for some years.
181. You stated that they had a large establishment there for the delivery of coal, which was kept up at a large expense—what is the necessity for that large expense? The expense of labor for the delivery of the coal; the coal has to be brought here, and then it has to be delivered by their coal arrangement. There is the expense for manual labor, horse power—each single waggon being raised by horse power, or by manual labor—and superintendence.
182. In your opinion, it would be cheaper for the Company to co-operate with the Government than to deliver their coals by their own arrangement? It is not only mine, but it appears to be the opinion of the Company themselves.
183. They would have nothing to do, then, but to get them at the mines, and to hand them over to you to deliver? Yes; we might take the whole coal traffic.
184. With reference to bringing the Terminus here—if the line were laid from the mines to the staith, would there be any inconvenience to steamers that required immediate despatch? We propose that our arrangements shall be so complete that we shall be able to give them their coals forthwith. There would be a constant delivery of coals along this line, and as I suppose the steamer would make arrangements with a particular Company for her supply of coals, we should deliver them as speedily as possible.
185. Do you propose having a number of staiths? Yes; this plan is drawn for two, in the first instance; and we conceive that, with the more complete arrangement we shall have, we shall do as much as is done with the whole of the present inefficient arrangements.
186. Are you aware that, by the present arrangement of these staiths, the steamers are sometimes put to great inconvenience from being unable to get coal? I have heard so.
187. Do you know that considerable damage is done to shipping by being obliged to haul off? I know that vessels have in some instances been delayed three or four months in waiting for their turn to go under the shoots.



- G. K. Mann, Esq.  
16 Dec., 1856.
188. Have you not heard of considerable difficulty having been caused to steamers which must go on, by vessels lying under the staiths? I have heard incidentally, but I am not cognizant of any particular instance of it; but, generally speaking, I know that there is a want of facility in loading vessels.
189. Are you aware whether the Australasian Steam Company have made any complaints with regard to that? I am not.
190. *By Mr. Rusden*: Does not the road from Maitland to Newcastle run through Hunter-street? Yes.
191. That is the main communication with the City of Newcastle? It appears to be so.
192. From the sand hills to the Bank of Australasia, is not the town backed in by an elevated range? Yes.
193. Does not that range cease at the Bank allotment? I do not think it does; that range continues round there (*referring to the plan*) a considerable distance.
194. Is it not nearly flat from here (*pointing to the plan*) to the next reach of the sea—the Coal and Copper Company's line runs upon the flat to the next ridge? This is a range all round here.
195. The land opens considerably to the westward? I think it does, after you get a considerable distance out of town.
196. Is not the town extending very much in that direction? I am not aware that it is; there are no houses here towards Maitland.
197. Will not the proposed line or lines from Honeysuckle Point, along the water frontage, interfere very much with the comfort of the inhabitants of the town? I think not.
198. Does it not cut off the frontage by fencing? I think not.
199. Does not the proposed line cross nine different streets? Six.
200. Then there are to be six gates and six keepers to those gates—would not that enhance the permanent cost of the Railway very much, from the attention that would be required? I do not think it will be necessary to give a level crossing to each of these streets; if there were ample and sufficient access to these wharfs, that is all that would be required.
201. Then do you propose to have only one crossing? I am hardly prepared to say the number, but certainly more than one.
202. Is not that included in your estimate of cost—have you estimated for one or more? The gates are put down; the arrangements as to the number is a mere trifle. The number of crossings are not definitely fixed; in fact, it would be unadvisable until the level of the work was actually carried out, to fix the sites for the level crossings.
203. That has not come into your arrangement yet? Not the number of crossings.
204. Do you not think, if the Terminus were kept at Honeysuckle Point, that eventually, from the increase of population, it would be placed in the centre of the town? I do not think it is possible to make a Terminus at Honeysuckle Point for the delivery of goods, for the coal arrangements communicating with the harbour, and for the traffic of the harbour itself.
205. Has not great expense been incurred by cutting and placing piling for Honeysuckle Point—there are a number of trees lying on the ground there? The Commissioners have nothing to do with those trees. I believe that is timber brought there by the contractor originally with the idea of forming a jetty.
206. Some expense has been incurred, I suppose, in preparing this piling? Not by the Commissioners.
207. By whom has that expense been incurred? I suppose by the contractor.
208. He has to be paid? He has not done it for us, but on his own speculation.
209. Was all that timber cut without any order? It was not cut for us. The timber for this viaduct has been used and paid for.
210. Would not a double object be gained by carrying out this jetty into deep water—that there would be two places for loading vessels instead of one; and would not that object in such a town as Newcastle be worth some thousands of pounds? I do not know exactly how it could have been possible to have had two places without increasing the head of the jetty.
211. That is a matter I thought was intended in the proposed construction of the jetty? Some additional arrangements would necessarily have been made at the head of the jetty.
212. If the jetty had been run out, was it not the intention to have continued it from the point of the jetty, where deep water is, to Queen's Wharf? The Commissioners never had any intention of such a scheme, nor do I believe it hardly possible to have carried it out.
213. You have stated that overtures had been made by the Agricultural Company to the Railway Company to ship their coals—why should they do this when they already have private wharfs of their own? I presume that with our more complete arrangements we shall be able to deliver their coal with greater advantage to the Company; that it would be cheaper to them to deliver their coal by means of an arrangement with the Government than by keeping up establishments of their own.
214. The Coal and Copper Company could not make such overtures, for they have no private arrangements—they have no private wharfage? I am under the impression that they are there on sufferance.
215. It is Government wharfage? Yes.
216. Therefore they would be compelled to come on your line? They would come in as a matter of course.
217. Therefore, it is not necessary for them to make overtures, as they would be obliged to come? Without mooted the question whether they will be deprived of their wharf they have made overtures, not only respecting the delivery of coal, but to take the whole haulage of it from the mine.
218. Is it not intended to keep a great deal of wharfage in the hands of the Government, and to charge rent or wharfage dues? It is the intention, I believe, but whether they will be required to pay rent, or what other arrangement will be made, I cannot say.

219. I have understood it is the intention of the Government to keep nearly all the frontage? G. K. Mann, Esq.
220. You cannot say it is the determination of the Government? I cannot.
221. If this were done would it not cause great dissatisfaction? That is a question I cannot answer. 16 Dec., 1856.
222. Have they the wharfage free at present? It generally is the case. I believe that when persons have had nothing to pay for an accommodation when called upon to pay for it they are dissatisfied.
223. It is cutting off a frontage that they have up to the present moment enjoyed? I was hardly prepared to give you evidence upon these points, for I have not heard what is the determination of the Government with regard to this wharf; I know nothing about it.
224. Still you would naturally imagine it would have that effect upon the inhabitants? Well, if I had myself had the use of one of these staiths for nothing I should very likely grumble; I believe that is human nature; but I do not see why the Government should not resume possession if it is to the public interest to do so.
225. If this proposed jetty at Honeysuckle Point had been carried out, ships of what burden would be able to load there? It was proposed to carry the jetty out in order that the heaviest vessels that came into the harbour might load there.
226. Of what burden? I believe vessels of four or five hundred tons are the largest vessels that come into the harbour.
227. The only reason that I heard in favour of this Railway being carried to the sand hills, when I was at Newcastle, was that large ships after having filled to a certain extent at the proposed jetty, would afterwards have to be filled up by lighterage? If the jetty were not carried for three-quarters of a mile out into deep water, you think it would not be necessary to fill vessels by lighterage? I think that three-quarters of a mile would not give above thirteen or fourteen feet of water.
229. Will the foundations for the buildings be good at these sand hills—has it been tried? It is a rocky foundation, with a sandy covering.
230. What is the depth of sand? In some places the sand is of considerable depth, but in others there is merely a covering of sand on the surface.
231. Is it intended to ship the coals at Watt-street? Beyond Watt-street.
232. I understood that the coal wharfs were intended to be nearly where they are at present? The fact is, that a great number of plans have been drawn, and designs made, in considering these questions, and trying to get over these difficulties. It was designed at first to have had the coal shoots here (*pointing to the plan*), and eventually to have carried them on.
233. I understand your present plan to be, to carry out these two lines, only having one elevated and the other depressed? Yes.
234. Then what use is to be made of this water frontage? It will be for wharfage for the general use of the town.
235. If all the goods and coals are intended to be shipped near Queen's Wharf, is not the main channel there too confined to contain half-a-dozen ships at once? We cannot enlarge the harbour.
236. But is it not concentrating to one point all the shipping? Still there will be a considerable amount of wharfage here for the coasting traffic not engaged in the coal trade, and we conceive that our arrangements for goods and coals will be so much more perfect, that vessels will be able to get away more quickly than they do at present. They do not necessarily lie alongside the wharf until it is their turn to come under the shoot, but lie off out of the channel.
237. Do you not think it objectionable to draw all the traffic to one place in a harbour so particularly confined? The traffic must come to our Terminus wherever we have it.
238. That is the only place that will be used by the public, and if you concentrate the traffic there you must necessarily confine all the business to that particular spot, which is not the case now, because there are the wharfs at present used by the Coal and Copper and other companies? These wharfs would still be available.
239. How, if you have an elevated and lower line will they be available? In drawing out this plan, one of the designs we had was, not to interrupt the coal traffic at these parts of the harbour, and the line does not interfere. Here is the Coal and Copper Company's line (*pointing to the plan*) running parallel to the Agricultural Company's land; they cross our line here, and come upon their own staiths without interfering at all with our line. This might remain, if the Government chose, for years. If that line of their's were abandoned, they would come in here (*pointing to the plan*).
240. Then, if they adopt your line, these wharfs will be done away with? Yes.
241. That is a proof that it will concentrate all the traffic to one point? I believe the traffic will concentrate. No doubt the goods and coal will all be taken and delivered both up and down by the rail.
242. If the intended jetty had been carried out, was it not proposed to run it out to the main channel? That would have been the only use in putting a jetty there.
243. Is not the general feeling of the inhabitants of Newcastle against the Terminus being at the sand hills? I think not.
244. How is it that the houses built by the tenants, or rather, how is it that the house built by Dr. Stacey—for I refer particularly to him—has been taken from him and occupied by the Government for nine months without compensation? The question of compensation is unsettled at present.
245. Compensation for land—but it is a strange thing to take a man's house away from him? The Commissioners have been unable to compensate Dr. Stacy.
246. That is for the land, I suppose, but I am talking of his house? They have not been able to give anything in compensation, for it is not yet decided who is to be compensated.
- 247.

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16 Dec., 1856.
247. By means of piling from the extreme end of Bullock Island over the edge of the shallows to the Company's Wharf, would not the channel have been much deepened and improved, and was not that the original intention? I am not prepared to answer the question as to the probable improvement of the channel, but the design has never been the design of the Commissioners.
248. I understood that if the jetty had been thrown out here the original intention was to reclaim this by a system of piling; would not that be an advantage? It might be, or it might not; I cannot say whether it would be advantageous or not.
249. You would get all this (*referring to the plan*) as a harbour? I am not prepared to give an opinion.
250. You would have 23, 24, and 25 feet depth, and plenty of room for shipping? I do not believe that piling could be put in there for £100,000. It is a very intricate engineering question whether it would improve the harbour or not.
251. If such a plan were adopted would it not afford a large harbour; does it not run to all the deep water in the harbour, and the greatest expanse of water. Therefore, in considering a permanent work, such as this under discussion, would it not be advisable to look into all the capabilities of the harbour, and make this work a permanent and enduring one, that it might be to the advantage of the country eventually? I do not think the plan proposed would answer; it is one I am not at all disposed to recommend; before doing so, it would be necessary to give serious and mature consideration to it.
252. Still it is worth consideration? Not at the present stage; at some future day it might be advisable, but not at the present moment.
253. Would it not be advisable to ascertain what the cost of that piling would be? If it would improve the river it would be.
254. Do you not think it would improve the river? I am not prepared to say.
255. It is worthy of investigation? It is worthy of investigation.
256. *By the Chairman*: I think you stated that there was some dispute with respect to the legal proprietorship of Honeysuckle Point. I presume the Commissioners would treat only with the legal proprietors? They could only do so.
257. They would not enter into any equitable claims that the tenants might have as against the proprietors? We have not the authority to deal with the tenants: there may be many cases of hardship in respect to tenants found upon the land; but the Commissioners have not the means of taking that into consideration.
258. The estimate for the construction of the jetty you stated to be £37,500? That was the amount put down in a rough estimate that was made for a vote, but I believe myself it would cost more than that; I believe it would cost £50,000 or £60,000.
259. If it would have cost £50,000 that would not have been equal to the sum that the mile of railway to the proposed Terminus at Watt-street, according to your own estimate, would have cost? I think it would have been more than £50,000; that would only have constructed the timber work of the jetty, besides, all the terminal arrangements would still have had to be made.
260. You have stated that the inhabitants of Newcastle will derive great benefit from the reclamation of the sand hills at the point beyond Watt-street? That is my opinion.
261. In what way will they be benefited by that? There is now a large area of ground here which is swampy and unavailable for any purpose, and the sand hills would be reclaimed to a certain extent.
262. With respect to the swamp, do the Commissioners intend to reclaim that? This will be reclaimed by the Commissioners as they require it.
263. When they have reclaimed it, in what way will the public be benefited? The very occupation of land which is now a waste will be a benefit to the town.
264. In no pecuniary way would they be benefited? I think they would be by the bringing of traffic, which would necessarily follow the formation of a Terminus.
265. That is derivable from the formation of the Railway and not from the reclamation of the land? It would add considerably to the available land there.
266. Whatever land may be reclaimed by the Commissioners, I presume if it were sold the proceeds would go into the general Treasury? Yes. It would not be any direct, but merely an indirect advantage to the townspeople.
267. The land would, in fact, be as it is now, the property of the Government? Yes. But when I spoke of benefit I referred to the general improvement of the town, which, of course, would enhance the value of property in it.
268. You believe that the extension of the Railway from the point where it is now finished to that you now propose would be an improvement of the town? Yes.

THURSDAY, 18 DECEMBER, 1856.

Present:—

MR. PIDDINGTON,	MR. JONES,
MR. WEEKES,	MR. F. RUSDEN,
MR. BUCKLEY.	

E.O. Moriarty  
Esq.

18 Dec., 1856.

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

Edward Orpen Moriarty, Esq., called in and examined:—

1. *By the Chairman*: You are a Civil Engineer, I believe? I am.
2. Are you acquainted with the proposed extension of the Railway from any settled point through the centre of Newcastle to the Terminus at Watt-street? Yes, I know the ground.
3. Are you acquainted with the proposal generally? Generally, I am. I do not know anything about the details of it.
- 4.

4. What is your opinion with respect to the question whether that line would not interfere with all the streets through which it has to pass to reach the edge of the harbour, from south to north? It would cut off the water frontage from the town. E.O. Moriarty  
Esq.
5. If that line is adopted it will interfere with the access from the town to the harbour? Yes, unless it is carried on a viaduct. 18 Dec., 1856.
6. Suppose the line was carried on a level with the roadway, what would be the effect? It would affect the communication between the wharfs and the town in some degree.
7. Are you acquainted with the area of accommodation in the harbour of Newcastle in the neighbourhood of Watt-street and Queen's Wharf? Yes.
8. Is the accommodation of that part of the harbour sufficient for the shipping now frequenting that port? Do you mean wharf accommodation?
9. The harbour accommodation and anchorage? It is very limited close to Watt-street, between the wharf and the bank.
10. *By Mr. Jones:* That is called Horseshoe Bank? Yes.
11. *By the Chairman:* Then it is a natural presumption, that when the Railway is completed, the demand for shipping anchorage will increase with the commerce of the town? No doubt of it.
12. In the event of any increase in the commerce of Newcastle, the anchorage ground and the proposed Terminus of Watt-street must be inconvenient? Yes.
13. Are you aware that the Commissioners propose a double line of Railway? I do not know the details of what they propose.
14. If they propose a double line of railway, one a coal line at a considerable elevation, and another for the transit of goods and passengers, will it not entail a very heavy expense? Yes, it will cost a good deal of money.
15. Have you considered whether any other Terminus to the Railway might be adopted with advantage to the public beside the Terminus at Watt-street? If I were doing it I should have my main Terminus at Honeysuckle Point, or in some other place likely to be central to the town, with a branch to the water side.
16. If you were the Engineer, your plan would be to have the Terminus at Honeysuckle Point? I would have the main Terminus there, or in some other place equally convenient, and the carriage shed and the goods shed out of the town. The practice at home is never to put a large station in the heart of the town, because the ground is too expensive and valuable.
17. By what mode would you secure the means of shipment at Honeysuckle Point? I should carry on a branch line to some convenient spot near the water's edge.
18. Have you ever considered the eligibility of Bullock Island as a Terminus for the Railway? Well, I did think of it once; in fact, I mentioned the matter to the Chief Commissioner of Railways at one time.
19. Do you still continue to be of opinion that Bullock Island might be used as a Terminus? I do not think it would be so convenient for the public generally as the new wharf.
20. Would there be more or less accommodation for ships at Bullock Island, than at the new wharf? Yes; there would be far more accommodation.
21. If there were more accommodation at Bullock Island, would that not be a greater convenience for the public than having a Terminus at a point where there was a very limited accommodation for the shipping frequenting Newcastle? I do not think it would, and for this reason, I think it is a mistake to fancy the railway people are to be shippers as well as carriers of goods. I think eventually all the goods that come down the Hunter will be shipped direct to England, and will therefore be shipped by the merchants to whom they may be consigned, and from their stores.
22. If that is the case will not the goods come down to be shipped by the Railway? The goods will be consigned to the merchants and not to the Railway Commissioners. It will never do for the Railway Commissioners to store goods for months until vessels are found to convey them away.
23. My question does not assume that the Railway Commissioners are to be shippers of goods, but whether shippers of goods would not use it? Bullock Island would afford greater accommodation to the public, on account of the greater depth of water there than at the proposed Terminus at Watt-street. I think the Railway Terminus should be in the most central part of the town with regard to all the wharfs.
24. Have you considered the question as to which point is the most central position? I think Honeysuckle Point is the most central to where the town is likely to be in course of time. It may be months before the goods that come down by Railway are shipped.
25. Whether the goods are detained in Newcastle or not, they might be shipped at this port by the Railway? No, I think not; the goods that are sent down are not consigned to the Railway but to the merchants, who carry them from the Railway to their stores. The position of the Terminus ought to be central with reference to the wharfs of the town.
26. The question of the general area of harbour accommodation ought to be considered in reference to a Terminus? Most certainly.
27. Without any reference to the harbour accommodation of the ships? I would have reference to the two, because the business part of the town eventually follows where the best harbour is.
28. You stated if you were the engineer of the line you would fix on Honeysuckle Point as the Terminus? Yes.
29. Would you fix on Honeysuckle Point, without any reference to harbour accommodation? I look on it as more central to where the town is likely to be.
30. Do you think the accommodation of harbour at Bullock Island is counterbalanced by Honeysuckle Point being more central? Yes; I think the town will extend from Bullock Island as far as Nobby's. The vessels can land their goods along the entire front of the town; and these goods will be carried to the merchants' stores which are scattered about the

B.O. Moriarty the town. These goods will always go the merchants' stores and not direct to the Railway stores.

Esq.  
18 Dec., 1856. 31. You are acquainted with Newcastle—in what direction will the town extend? I think in the direction of Honeysuckle Point.

32. Is there no chance of its extending to the eastward? No, none.

33. Have you considered whether any portion of land could be reclaimed from the Hunter River, from Bullock Island and a line drawn north of Honeysuckle Point? I have long looked on that as a valuable piece of land.

34. Have you formed any opinion of the probable expense of running a line of embankment from where the Hunter River is to be deepened to the north point of Bullock Island? No, I have not.

35. Can you give any estimate of the probable expenditure of such an embankment? I suppose it may cost about £20,000, at a rough guess; it would require some calculation to state the amount with anything like precision.

36. You say it would cost £20,000, at a rough guess; can you give the Committee some more definite idea of what the amount would be—do you think it would amount to £40,000, that is double your rough guess? Do you mean including the wharfs?

37. No, the mere construction of the embankment? No, it would not.

38. How much land could be reclaimed between Bullock Island and the proposed embankment? I do not know where that is to be.

39. How many acres could be reclaimed from Honeysuckle Point to the northern part of Bullock Island? I think about 700 acres.

40. Would that land be reclaimed gradually by throwing ballast there? Yes it would; there can be no question that it would be reclaimed in the course of a few years, if the colliers coming down with ballast were to drop the ballast all along the bank, first forming the sea side of the harbour, and eventually carrying it in further and further as the matter accumulated.

41. Do you think for £40,000 a very secure embankment could be formed from Honeysuckle Point to the north point of Bullock Island? Yes.

42. Would that sum be sufficiently large to carry on the line of Railway? Yes, quite sufficient.

43. Are you acquainted with the level of Bullock Island above water mark? Yes.

44. Is it below the Railway line as it at present exists? There may be a difference of a few inches, perhaps a foot.

45. *By Mr. Jones:* You are merely guessing now? Yes.

46. *By the Chairman:* If so much as 700 acres could be reclaimed, the value of that land would much more than reimburse the expense incurred by the construction of this embankment? I do not think the construction of the railway embankment would tend to reclaim the land. The land could only be reclaimed by the ballast which is brought down by the return colliers and dropped all along the bank. It is that ballast that I look upon to reclaim this land.

47. Would the ballast increase the inclination or impede the vessels? I do not see how it can, unless they have to bring the earth down from the interior.

48. How far as it from the end of the existing line of Railway near Honeysuckle Point to the centre of Bullock Island, or to the centre of any proposed embankment? That question is very vague. I do not know where the embankment goes to, or where it is proposed to carry it to.

49. It is proposed to carry it to the centre of Bullock Island from Honeysuckle Point where the line of rails is laid? About a mile.

50. I presume it is the same distance from the same spot to Watt-street? Not so much; it is only two-thirds of the distance.

51. Have you any reason to suppose that it would be more expensive to construct a line of Railway from Honeysuckle Point to Bullock Island, than from Honeysuckle Point to Watt-street? I think it would be cheaper to construct a line of Railway to Watt-street, if it was kept on a level, and you had not to purchase ground at a high cost.

52. Would you oblige the Committee with your reasons for thinking a line to Watt-street would be cheaper? The distance is shorter if the Railway is kept on the level in both cases; and there would be less embankment required in going on to Watt-street than in going on to the centre of Bullock Island. If the ground belongs to the Crown, and you can cut off the water frontage of the Town of Newcastle, it would be cheaper to carry on the line to Watt-street.

53. Suppose the same probability of expensiveness existed in both cases, would there then be any difference? I think the Watt-street line would be the cheapest if the line was constructed the same in both cases.

54. You think the level of Bullock Island is only a few inches above water mark? I think it is not more than one foot; I speak only from looking at it; I have not levelled it.

55. If it was not more than one foot, the increase of embankment would not be very great? It would be very small; the rise of tide is not more than 4 feet 6 inches; about 8 feet of embankment would be sufficient.

56. An embankment of that height is not a very expensive work? It would also require a bridge over the creek that runs at the back of Bullock Island.

57. Do you know the depth of water in the neighbourhood of Bullock Island? Yes.

58. What is the depth, taking the centre of Bullock Island as the point in the channel? Twenty-three feet.

59. And is the width of the river from the North Shore to the centre of Bullock Island very much wider than from Watt-street to North Shore? It is not so wide, but the river at Watt-street is obstructed by the Horse-shoe Bank. So far as the obstructions go it is limited at that part.

60. But without any of these obstructions is the river wider, or is there more accommodation at Watt-street than there is at the North Shore? No, on account of these obstructions Watt-street has not so much accommodation as there is at the centre of Bullock Island. E.O. Moriarty  
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61. *By Mr. Jones*: You state that you regard Honeysuckle Point as the most central point, and most eligible spot for the Terminus of a Railway? I look upon it as the most central Terminus, but it would require a branch line to the water's edge in order to get up the plant for the extension of the line, and to accommodate the passenger and light goods traffic.
62. What useful purpose would be answered by extending the line to Watt-street, commensurate with the cost in so carrying it on? I think they will require a way of access to deep water, in order to get up their materials for an extension of the lines. You will soon waste a good deal of money in getting the rolling stock over bad roads. I should extend the branch from the main Terminus to the nearest point of water frontage.
63. Could you not reach deep water at a much shorter distance from Honeysuckle Point than by going to Watt-street, by taking the west end of the town? Yes.
64. You would not propose to extend the line to Watt-street for the purpose of shipping goods, or the ordinary purpose of getting the rolling stock? No, I do not think it would be much used for shipping goods.
65. You think, supposing the Railway was carried on to Liverpool Plains, that the goods coming down to Newcastle would be consigned to persons in Newcastle, and would be delivered straight to those persons to whom they were consigned? Yes.
66. And these goods would be shipped by them? Yes; in point of fact, the Commissioners of Railways would not be the shippers of goods, but they would be merely the carriers of goods to the centre part of the town.
67. Do you think the goods sent from Sydney to the merchants in Newcastle would be dispatched by them from that place to the up-country settlers in as required? Yes.
68. Therefore you do not consider it necessary for carrying out the proper object of the Railway, that the Railway Commissioners should provide facilities for shipping all goods from the up-country, or should provide sheds for storing them? I feel quite confident that if the Railway Commissioners bring down goods to the water's edge they would be carried back to the merchants' stores, just the same as those goods that are brought down from the interior to Sydney are not at once taken to the ship's side, but are taken to the merchants' stores. As regards imported goods, they are sent to the consignees, and are distributed to their customers as they are required.
69. No arrangement they could make would make them the shippers of the goods sent from or to the Colony? No.
70. Therefore it would not be desirable for any large expense to be incurred at Newcastle, with a view of affording the Railway Commissioners facilities for shipping goods, or of sending up goods that are sent by sea to Newcastle? No, it would not be desirable, in my opinion. I should prefer expending the money on extending the lines into the interior.
71. The proposal of having a Terminus at Honeysuckle Point would be economising the purposes which the Railway Commissioners have in constructing their line? Yes.
72. And not with a view of affording accommodation to the persons who are shippers of goods, but more for their own convenience? They might to a small extent be applied to the direct shipment of goods. If the steamers touched there, they would take passengers and their luggage; I do not think for the general trade of the country they will serve the purpose of shippers.
73. Are you aware whether the coal miners are allowed any facilities for shipping coals at Newcastle—they have some coal stations there, and some tramways? Yes.
74. Would they, as shippers, be benefited by the construction of a line of Railway at the proposed Terminus at Watt-street, instead of shipping at their own stages? That would depend on what the Railway Commissioners charged.
75. If the Railway prices were the same as the boats, what advantage would they gain by sending their coals down to the Terminus at Watt-street for shipment, instead of sending them to their own stages? I do not think they would be benefited.
76. Do you think the coal miners would use the Railway for such purposes, supposing the Railway Commissioners contracted to take them at such prices as would suit the coal miners? I think if great facilities were afforded by the Railway people, and if they charged a low rate for shipping coals at this place, the coal miners might take advantage of it.
77. The rate that would induce them to take advantage of the Railway must be very low indeed? Yes—not otherwise.
78. Suppose the rate was so low as to induce them to take advantage of the Railway, do you suppose the revenue derived would be in any proportion to the cost of the Railway, and expense of management? I do not know; I have not considered the question sufficiently to say.
79. Where do you suppose the coals would come from? I suppose they would come partly from the Australian Agricultural Company and Newcastle Coal and Copper Mining Company's pits.
80. Do you expect the Minmi pits—Mr. Eales' pits—would send their coals by Railway for shipment? I do not think it a legitimate proceeding for the Railway Commissioners to meddle with the coal pit miners of Newcastle. They would only use the line for a short distance, and it would not be worth their while to afford facilities to ship the coals, because they would not be compensated by what they would receive.
81. If they proposed to bring the coals from Morpeth up the line they have at the same price as the coasters, would they not be employed to do so? I do not think they would, unless they held out some great facilities. The freight for coals from Morpeth is now 9 shillings per ton, from Newcastle 8 shillings. The Railway Commissioners would therefore have to carry it for 1 shilling per ton for 20 miles, or about one-half penny per ton per mile, in order to compete with the colliers on the river. 82.

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82. Has it come to your knowledge that Mr. Eales has made a tramway from his pits at Minmi to Hexham? I have heard of it.
83. Suppose he has incurred great expense in making this tramway from Hexham and Minmi, do you think he would feel inclined to avail himself of the Railway to Newcastle? I think not, if he has made a Railway to his pits, he must have made it with the intention of working it.
84. Are you not of opinion that the cost of carriage by river would be below the cost by Railway? Yes, if they charged the same rate as they are charging on the Sydney and Parramatta Railway, it would be very considerably below it. It is found at home that Railway conveyance for heavy goods cannot compete with water carriage. There is the Midland Great Western Line, for instance; they purchased out the Canal Company; as they went through the same district, the Railway Company purchased out the Canal Company; now although the Railway has been at work for five or six years, the Canal is still used for heavy goods.
85. Because it is found much cheaper? Yes.
86. If it is a fact that the Railway for the conveyance of heavy goods cannot compete with water carriage, is it not a fair presumption that the people who have coals in Morpeth will prefer shipping them at the bank of the river near the coal pits, rather than send them up by Railway to Newcastle? I think they would.
87. Have you any idea of the rate that would be charged? Not by the Railway Commissioners; but it could not exceed one-half penny per ton per mile if they wished to compete with the colliers; and I know they could not afford to do it for this.
88. Are you aware of the rate charged from Hexham to Morpeth, and from Morpeth to Sydney? I think 10s. I find it is 9s. from Morpeth; 8s. from Newcastle.
89. Are you aware of the rate charged from Newcastle? Yes, 8s. The charges are, Morpeth, 9s. per ton; Newcastle, 8s. per ton.
90. To induce the coal pit miners on a line of Railway to send their coals by Railway to Newcastle, the charge made by the Railway would have to be so small as they could ship it direct from their own places? Yes; it should not exceed the difference in the rates charged by the colliers from Hexham and Morpeth, and from Newcastle.
91. Do you think it is at all possible that the Commissioners of Railways, or those who work them, can afford to carry coals from any portion of the line to Newcastle at the same rate as the river crafts? No, I do not think they can. Sixpence a ton is the price, I believe, the Railway Commissioners propose charging. Now, estimating the distance from Morpeth by land at 20 miles, that would be 10s. a ton.
92. They can send by water from Morpeth to Sydney for 10s. a ton? Yes, for 9s. at present.
93. Your impression is, that there will hardly be found any great amount of traffic, no matter what rate they could afford to carry at, on a short line of Railway from the pits of Newcastle to Watt-street? My impression is, that the coal miners would not meddle with the Railway, if they had their own means of shipment.
94. *By Mr. Wrekes:* Do you not think it objectionable to cut off the whole water frontage of a town by a Railway running on a level? Yes.
95. Does this line not exclude the water frontage from the town? Yes.
96. Do you know an instance of a Railway running on the level cutting off the whole of the water frontage of a town? I cannot say I do.
97. Would you think it justifiable except for the strongest and most imperative reasons? I think not.
98. I understood you to say your main station would be about Honeysuckle Point, and that you would have a branch line to the Circular Wharf? I would have a branch line to the nearest point of the water; perhaps the best place for a small station would be just to the eastward of the Australian Agricultural Company's staiths.
99. Would you think it desirable under any circumstances to carry it to Watt-street; would you not carry it further than Watt-street? I think that would be very objectionable, if the line goes on to Nobby's. The space at Watt-street and the water frontage is hemmed in by Horseshoe Bank, and beyond that the water is too shoal.
100. As that is the only station at which goods are to be taken in and put on board ship, would not that lead to a great accumulation of shipping at that point, that is, supposing all goods are shipped from the Railway Terminus? I do not think that is likely to occur.
101. Would it not lead to an accumulation of shipping at a particular spot, so that it would be desirable that the goods landed or shipped should be as near the Terminus as possible? I think it would lead to an accumulation of vessels if there was much trade to the Railway Terminus.
102. Where would you conceive ships would lie taking in wool? They would lie along side of the Terminus, if the Railway Commissioners were to be shippers.
103. Are not wool ships a considerable time filling up? Yes, they are.
104. And, in addition to the wool ships, the present proposal of the Railway Commissioners is that at the spot colliers also shall load? Is that their proposal?
105. Yes; they are all to go to Watt-street—would not that lead to an immense accumulation of shipping at that spot? Yes; that small section would be altogether insufficient for the traffic of the Hunter.
106. At that particular spot, which is the best entrance of the harbour—Newcastle is but a narrow spot, hemmed in by Horse-shoe Bank? Yes, the Horse-shoe Bank terminates between Watt-street and the new wharf.
107. You would think it very undesirable that that spot, which is already very narrow, should be further narrowed by a large accumulation of ships on this particular spot? I do not think it desirable that an accumulation of vessels should be allowed to form there. If that is done it will completely shut up the coal channel, and prevent vessels going in and out there.

108. As it is intended that Newcastle should be the port where vessels shall load direct for England, that would lead to the erection of stores in the heart of the town? Yes. E.O. Moriarty  
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109. The main Terminus being at Watt-street, would it not be inconvenient if the merchants who had their goods sent there, had to carry them back to their stores? I think that would lead to great inconvenience. 18 Dec., 1866.
110. Do you see any corresponding advantage in having the main Terminus in Watt-street—would it not be counterbalanced by the various objections which you have stated? I cannot see there is any particular advantage. I do not think it is necessary for the main Terminus of the Railway to come down to Watt-street. I think there ought to be a branch line to some convenient place near the water. I would not advise wasting such a large sum of money as it would require for making the main Terminus down to the water's edge, at Watt-street.
111. You say you had some conversation with the Chief Commissioner of Railways respecting Bullock Island? I mentioned it casually.
112. Did you mention the subject of reclaiming the land there? No.
113. Do you know the value of the land about there? It is worth about £800 per acre.
114. I believe some allotments have been sold at £100 per acre? I believe not at Bullock Island. A letter was sent to me from the Surveyor General, stating it was proposed that Bullock Island should be measured and sold, and asking my opinion whether it was desirable to do so, considering the improvements at Newcastle. I said I did not think it was desirable to sell any land at Bullock Island, as I believed, in a few years, it would be worth one hundred times as much as it is now.
115. *By Mr. Buckley:* You say you do not think it desirable to have the main Terminus at Watt-street? I cannot see any great object to be gained by it.
116. Supposing it was an inconvenience to parties having produce to send down the river, and who were shippers to a large amount, to receive it at the station at Honeysuckle Point, would it not be for the convenience of parties who have wool and other produce to send down to receive it at Watt-street? Not if they have to convey them back from the Terminus, at Watt-street, to their stores, which might be at the other end of the town.
117. The erection of sheds to receive these goods would not involve any serious expense? I do not think it would. There must be sheds of some kind erected. It would cost no more to erect them at Honeysuckle Point than they would cost at the other Terminus.
118. You spoke of the cost of coals being delivered at the present stages for shipment—are you aware of the enormous sum of money that has been sunk by the companies in horses and rolling stock for that purpose? Yes, I have heard that large sums have been so invested.
119. Do you think the cost is very considerable for the present rolling stock, horses, and the labour of putting the coals on the vessels? Yes.
120. You imagine the value of the plant is considerable? Yes.
121. And the cost of working it is very large? Yes; I think it comes to something like 2s. a ton on coals delivered.
122. That has no reference to the cost of raising the coals and getting them out of the pits? No; the cost of carrying the coals from the pits to the ships, and putting them on board, is about 2s. a ton.
123. Suppose the Railway was elevated for carrying coals, and suppose the Railway Commissioners contracted to carry them, do you think they would be able to land coals at any given point—do you think the coal miners would derive any advantage from making an arrangement with the Railway to carry their coals, and so dispense with their present plant? They could not dispense with their plant, because they would have to bring the coals down to the Railway, which is a short distance from the pits.
124. Would it not do for the Railway to make a line this short distance? Not unless they offered great facilities for loading, and had convenient stages made.
125. Suppose there was this short line, if an engine were attached on to a great number of coal trucks, would not the companies be able to dispense with a number of horses and labor they now require? Both these companies are going to work their lines by locomotive in future. They are laying down heavy rails for the purpose; and the Newcastle Coal and Copper Company's line is almost laid down.
126. Are you aware whether any inducement had been held out by the Railway Commissioners of constructing an upper line for the use of the coal miners? No, I am not. The coal and copper and other miners applied to the Government for wharf accommodation for the purpose of shipping coals. Their proposal was sent to me to report on, at the same time it was suggested that if wharf accommodation should be granted to them, it must not interfere with the working of the Railway. I have, on that account, not been able to report on this application until I hear what the Railway Commissioners are going to do.
127. Then their application is waiting to be reported on? Yes.
128. Have the companies any right to this part of the land where they have erected the wharfs? They are merely there on sufferance.
129. Have the two companies applied for the land for wharfs? Yes; the steam-boat companies have also applied for wharf accommodation, but I have been unable to report on them for the reasons I have mentioned.
130. For general traffic are they contiguous to the Railway? They ask for the land for certain purposes, for the purposes of trade generally.
131. If this upper Railway were constructed, would that facilitate the shipment of coals? It might facilitate the shipment, for the mode of shipping coals is very clumsy at present, and might be improved on.
132. Are you aware whether the coal-stages present difficulties for ships that go alongside? Yes.
133. Do they present difficulties for steamers? Yes; the whole thing is in such a small space; it is badly arranged altogether.



- E.O. Moriarty** 134. Are you aware of any damage being done to vessels in consequence? I am not.
- Esq.** 135. Would you not imagine that if greater facilities were afforded by the Railway Commissioners it would tend to a more rapid removal in or out of the vessels? Yes.
- 18 Dec., 1856.** 136. Would it not be possible to load ten vessels where they now load one? Yes, it would.
137. Is it the difficulty of getting coals at Newcastle and putting them on board that tends to hinder vessels from leaving the harbour as soon as they otherwise might? Yes; I believe vessels are kept waiting a considerable time sometimes.
138. Are the steamers put to great inconvenience in consequence? Yes; I have heard it said they are put to very great inconvenience in consequence. There is nothing like sufficient accommodation for shipping.
139. Suppose the Terminus was at Honeysuckle Point, what would be the accommodation for parties sending their produce down? I think they would send it down by the river.
140. Do you think no one living on the line would take advantage of it? Persons living on the line would certainly do so, unless the rates were much higher than by the river. I think the produce from the banks of the river would come down by vessels.
141. Have you no idea of the cost of sending down pastoral produce? Present rates from Morpeth to Sydney are—Freight on goods generally from the Hunter to Sydney, 17s. 6d. per ton; wool, ordinary bales, 10s. 6d. per bale; grain, 6d. per bushel. Freight from Sydney to the Hunter, Morpeth, or Newcastle—Goods generally, 15s. per ton; salt, 10s. per ton; sugar, rice, iron, 12s. 6d. per ton.
142. Have you any idea what vessels charge at Hexham loading for Newcastle? No.
143. You are aware that large bulky produce comes down the river—would not that be sent down by the Railway? I do not think very much of it would; perishable articles, such as fruit, might come down by the Railway.
144. Do you think the wool would be sent down by the Railway? No. As the freights from Morpeth to Sydney, and from Newcastle to Sydney for general produce are now the same, I do not see why producers should send their goods by rail to Newcastle if they can get them shipped from Morpeth for the same rate.
145. Do you imagine that it will be a great many years before the pastoral produce, such as wool and tallow, will be shipped to England direct? I think, if there was a good wharf, a good deal would be exported direct from Newcastle to England.
146. Do you imagine the Sydney interest is not sufficient to take the great portion of the pastoral produce? I do not see why the Sydney interest should make them send their produce there; they have to pay 3 or 4 per cent. more by sending goods to Sydney.
147. Suppose a party wanted to sell his produce before it went to England? I think it might be done in the same way at Newcastle as it is done here in Sydney.
148. Do you think the vendor of such produce would be in as good a position for selling in Newcastle in two or three years time instead of sending to Sydney? I do not think there would be any great difference; they might make an arrangement the same as is made in Sydney. I do not see any reason why the traffic that comes down the Hunter should come to Sydney, unless the small portion required for Sydney consumption, most of which is produced on the river, and would therefore come down by the river.
149. Was it not proposed to have a Terminus somewhere near the proposed Terminus at Honeysuckle Point? Yes; at the jetty.
150. What is the length of the jetty—three-quarters of a mile? The jetty would have been half a mile long.
151. Would not the cost of a jetty of that construction be very considerable? I think it would be objectionable in every point of view.
152. You think a jetty running out into the water would be most injurious to the harbour—would it not facilitate the traffic in any way? It would accommodate the Railway people.
153. Would there be any difficulty in getting vessels to lay alongside if there was a good strong tide? No; the depth of water there would be fourteen feet.
154. What would be the comparative cost of terminating the Railway there, and bringing it on to Watt-street—which would be the most inexpensive? I think it would be as cheap to carry the line on to Watt-street, because the jetty would have to be made either of timber or iron. The line to Watt-street would go all along Crown lands, with the exception of a short piece through the Australian Agricultural Company's land.
155. Does the jetty intersect land belonging to any person? No.
156. Does it go through the land of any body? I think no one's; it runs along the sand.
157. Can you point out in the map the direction the Railway would come to bring it on to Watt-street? It would take a straight line. The Railway constructed as far as this point would go along in front of the town.
158. Would the people of Newcastle suffer in any way by the Railway being carried on from this point? There is a difference of opinion; people on the eastern side of the town are anxious that the Railway should be carried on, because it would give additional value to the land; while people on the other side are opposed to it, because it would draw away the trade from them.
159. You take a dispassionate view of the matter; do you think it would be for the benefit of all parties concerned that the Railway should go to Watt-street? My idea is, that the main Terminus should be at Honeysuckle Point, and that there should be a branch to the nearest point of shipment.
160. How near could steamers run to Honeysuckle Point for the purpose of taking in passengers? About half a mile.
161. How far from Honeysuckle Point, and where would you propose having the branch line? Half a mile. Steamers might be coaled down there, and coals might be shipped.
162. Would it affect the interest of the Railway Commissioners representing the Government if they could not in some degree have the coal trade in connexion with their traffic? I do not think the coal trade would affect them. I think they may look to bring down some of the coals got near the line.
- 163.

163. Would it be for the benefit of the coal pits higher up to have a line of Railway which would take their coals and put them on board the vessels? Yes. I think they ought, in order to develop the resources of all the back country, to have some facilities. E.O. Moriarty  
Esq.
164. Would it endanger the lives of the people if the Railway was brought down to Watt-street? There would be proper crossings and gates, with police stationed at them, of course, but still it would cause an interruption to the traffic between the wharfs and the town. 18 Dec., 1856.
165. The coal trains are coming down all day? That is the reason why they propose carrying them on a viaduct. If they could carry one line on the viaduct, I do not see why the whole of the traffic might not be carried on that line.
166. Is it your opinion, then, that the Railway Terminus would be more advantageous for trade, and for the convenience of the inhabitants of Newcastle, if the Terminus was made at Honeysuckle Point? Not as the town is now; I only look to the future. In the course of twenty years I think it will be found that Honeysuckle Point will be the most central part of the town.
167. If the terminus was at Honeysuckle Point it would be inconvenient to the inhabitants of Newcastle to have the Railway terminate there without having some communication with the water's edge? Yes.
168. The expense of getting to the water must be incurred? Yes; it is necessary to get down to the water.
169. The construction of the Railway down at Watt-street would not prevent the reclaiming of the land? No, it would not affect it in the least.
170. You were speaking of an embankment somewhere here, in Bullock Island? Yes; the whole of that sandbank could be reclaimed by ballast, and I believe that before many years it will be reclaimed and faced with wharves. The sale of the land so reclaimed would pay for all the improvements on the Hunter.
171. Do you think, by the colliers who trade there throwing the ballast all along, there would be sufficient foundation for building wharfs on? Yes, quite sufficient.
172. You think that ballast is preferable to piling? Ballast would make a sufficient foundation when well packed and deposited, and allowed to remain for two or three years. Of course it may be necessary for very high stores to have a more carefully prepared foundation.
173. Would not the wooden piles at Bullock Island be subject to be destroyed by cobra? Cobra would not affect them if they were covered with sand. I propose using iron piles for the wharves.
174. Where do the bulk of the vessels go to load? To the coal staiths.
175. Is it not of advantage to have a Terminus near the edge of the water? I think it would be of advantage to have a branch Terminus at the water.
176. Is it not your opinion that it will be a desirable source of revenue if they provide means for bringing down the coals? I think it is indispensable, if they bring down the coals, to have some place for shipping them.
177. If a large trade took place in coals, and the present proprietors of the mines encouraged the Railway, would it not be desirable to have the Railway running through the town, and to offer every facility for shipping coals? I do not see that it is necessary for shipping coals that the Railway should go through the town. I do not see any great object to be gained by it; on the contrary, if a number of vessels were accumulated at the eastern end of the coal channel, taking in coals, it would render the wharfs on the western part of this channel, to a certain degree, inaccessible, and therefore useless.
178. Could not an arrangement be made with the vessels lying in the coal channel, provided the Railway was brought into Watt-street? That is only used by the coal vessels. If the Railway had the main Terminus at Honeysuckle Point they could have a small branch to where the coals are now shipped, or are lying for shipment.
179. The Railway Terminus at Honeysuckle Point would not be of the slightest use to the coal proprietors at Newcastle? No, not if it terminated there.
180. You have no information as to the cost of the two lines—I mean the line that runs along the ground and the elevated one? No; I do not know what the plan is.
181. You say you never heard of a Railway going through a town cutting off a portion of the water frontage of the town? I said that I had not heard of a Railway that cut off the entire frontage of a town.
182. Does this line, coming up to Watt-street, cut off the entire water frontage of the town? Yes, it does, the way Newcastle is stationed at present.
183. Supposing it terminated at Honeysuckle Point, as you say the town is expected to increase to the westward, would it not cut off the water frontage there in the same way? No; if it terminated there it would not.
184. You said the town of Newcastle would extend in a westward direction? No, in a northerly direction. I think, with the main Terminus at Honeysuckle Point, and a short branch line for the purpose of shipping coals at the site now used for that purpose, with a shed for passengers' luggage, would be quite sufficient for the traffic of the town.
185. What is your opinion of the value of land at Honeysuckle Point at this moment? I believe about £1,000 an acre. I have heard some allotments were purchased there for £800 per acre.
186. Did you ever see a plan of New York? Yes.
187. Do you recollect how far the Railway comes down the Lowrey into the city? I cannot say I do.
188. You cannot say whether it runs down a distance of two miles, and cuts off the water frontage from the east side of the town? No; I cannot say.
189. *By Mr. F. Rusden:* From the large hill, a range which looks in Newcastle from Watt-street to Brown-street, is not the town now increasing along the Maitland Road, and particularly in the locality of Honeysuckle Point? Yes.

- E.O. Moriarty Esq.  
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190. In fact, Newcastle cannot increase in any other direction? I look for an increase to the westward and to the north.
191. You said about 700 acres would be reclaimed if ballast were thrown on the sand or shallows, from the north end of Bullock Island to the end of the sand spit opposite Brown-street? Yes.
192. But the mere forming the line of embankment by ballast would not do much in reclaiming the land, unless other steps were taken? It may all be done by ballast.
193. What plan would you propose to adopt in reclaiming this land, and what would be the extent? I should propose obliging all the return colliers to throw ballast all along the edge of this bank; in fact, to continue the process now in operation.
194. Would it not be necessary to pile a line of embankment, to keep the ballast in its position, and to make it solid? No; the material from the dredge might be easily thrown on the inside of the ballast. An immense extent of ground has been reclaimed near Dublin, and in Cork, by this means. Several hundreds of acres have been raised from low swamps into high, firm ground, over which the houses and streets have rapidly extended.
195. You propose filling in by excavating the sands of the harbour? Yes.
196. What would be the expense of reclaiming this land? It would cost a good deal of money, but it would be rash to offer an opinion.
197. Still it would be worth doing—it would more than compensate the expense incurred? In years it would make the land immensely valuable; so much so, that I feel certain it would more than pay for all the wharfs and other public works of Newcastle.
198. Would it not be necessary to pile the embankment—do you not think the currents up and down would wash away the ballast? No, they would not.
199. The cost of piling would be very great? Yes; eventually, when they intend to erect wharfs, it might be done.
200. You say, in your opinion, that the main Terminus is well placed at Honeysuckle Point? Yes.
201. You say, that looking at it in every respect, and without any local prejudices, would it be for the benefit of Newcastle to have the Terminus there? I think it would be a good central position, looking to the probable future extension of the town.
202. If Bullock Island was reclaimed, the old Terminus at Honeysuckle Point would be in a very good position—that is central—considering the town would extend in the direction of Bullock Island? Yes.
203. You are of opinion that it is not necessary to have the Railway Terminus on a wharf, as goods must be stored generally before they can be shipped? Yes; unless for coal traffic, and for the purposes of the Railway itself.
204. If the Railway Terminus extended to the sand hills, or beyond Watt-street, it would be at the extreme end of Newcastle, and, therefore, not eligible, seeing that goods would have to be moved from there to the various stores? Yes.
205. Would it not interfere with the comfort of the inhabitants to take away the water frontage from them? Yes.
206. The Railway crosses six or seven streets leading to the water—should not this be fenced or railed off? You would have a level crossing, with gates.
207. The harbour is very confined near Watt-street—ships cannot lie there in any number? No.
208. How many can lie there? Two block up the channel.
209. If two would almost block up the channel, the harbour must be blocked up by the coal traffic—irrespective of that, how many could lie there while taking in stores? Allowing 200 feet for each vessel, there would be room for four vessels.
210. There would be wharfage sufficient for four vessels? Yes, to load and unload.
211. You have heard that if the Terminus was placed there some land would be reclaimed to the town by the Government? Yes.
212. How many acres would be reclaimed to the town if the Terminus was there? About thirty acres.
213. That does not include the sand hills also? No; they are private property.
214. What is the general feeling of the inhabitants, as to the Terminus being placed at Honeysuckle Point, or near Watt-street? The opinion of the inhabitants is divided. Those who live at either place wish it to be there.
215. What time would it take to reclaim 700 acres at Bullock Island? About ten years; supposing the work was not carried on with vigour.
216. If it were carried on as Government work generally is, what time would it take? It could not be done very rapidly, because it would have to be done by ballast, and the quantity there is not very large. Until it is reclaimed, the Terminus could remain at Honeysuckle Point, and, when reclaimed, a branch line continued to the water's side.
217. And this you think the best plan, instead of taking the main Terminus to Watt-street? Yes.
218. If this land is reclaimed at Bullock Island, Newcastle would have, as compared with what it has at present, a deep and commodious harbour? Yes.
219. Have you understood that the land at Honeysuckle Point is claimed by parties—you have no idea what it would cost the Government to keep or purchase this land? No; I have no idea.
220. You said that your impression is, that there is no occasion to alter the Terminus at Honeysuckle Point? The principal Terminus would require some sheds. I should keep the main Terminus at Honeysuckle Point.
221. You think it is the best place for a Terminus, for the reasons you have already stated? Yes.
222. Do you think it is better than the former plan of having the jetty? Yes.
223. You think the old plan is bad? I think it is.

224. The Railway plant is now a long way from the shipping—somewhere near Honeysuckle Point—is not the depth of water near the jetty sufficient for vessels? I do not know the depth of water there exactly. I think it is about eight feet.

225. Is there not more than nine feet of water there? No.

226. Considering all the circumstances, is this former plan, or the present one with a Terminus at Watt-street, in your opinion the best? I would have a branch line somewhere to the eastern boundary of the Australian Agricultural Company's land.

227. And the proprietors of the coal mines could have their coals taken a little further on? Yes, precisely.

228. The whole thing might be arranged with the Railway Commissioners, if it were found desirable to do so—this suggestion of yours would entail on the Government the necessity of purchasing this land from the company? Yes.

229. Under all circumstances you think that is the best place? Yes.

230. *By the Chairman:* I would wish to know, with reference to the population, in what direction you think it would extend—whether towards the Terminus at Watt-street, as proposed by the Railway Commissioners, or at Honeysuckle Point is the population to be found? I think the great bulk of the population is to be found at Watt-street, at present; but they seem to be extending in the other direction.

E. O. Moriarty Esq.

18 Dec., 1857.

WEDNESDAY, 7 JANUARY, 1857.

Present:—

MR. ARNOLD,  
MR. BUCKLEY,  
MR. FLOOD,

MR. PIDDINGTON,  
MR. F. T. RUSDEN,  
MR. WEEKES.

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

William Brookes, Esquire, called in and examined:—

1. *By the Chairman:* You are a resident at Newcastle? Yes.
2. Are you acquainted with the proposed extension of the Hunter River Railway from Honeysuckle Point, through the City of Newcastle, to a terminus at Watt-street? I am.
3. Will not that line intersect all the streets of Newcastle that run to the edge of the harbour? Every one, without exception.
4. Is not such a proposal likely to interfere with the access from the town to the harbour? Decidedly it is.
5. And if the line of Railway be on a level with the road, will there not be considerable danger to the public to be apprehended? Unquestionably. We have had one case during the last week, which has terminated fatally, through an accident occurring on a Railway which crosses the main thoroughfare—the Maitland Road—on the same level as this Railway will be.
6. Then, if this proposed line of Railway is carried out, in accordance with the proposal of the Railway Commissioners, to Watt-street, the town will be cut off from communication with the harbour, except by crossing the line of Railway? Entirely so; and I may add that the communication is very considerable, and likely to be more so, in consequence of the north shore having a population which is rapidly increasing. There is a regularly established ferry over there now, which can only be approached by crossing this level line. All the steamboat passengers from that point would have to cross it; and sailors, who are moving about perhaps at all hours, could not find a way to get to their vessels in any other direction. It would also interfere with the water supply to the shipping. While I am on this point I may also say that the Market Wharf, which has been guaranteed for the use of the city, and which to a great extent is in use by settlers for the discharge of their marketable commodities, will be cut off from the site set apart for the erection of the Market. Perhaps I can shew you better by reference to a map I have here. (*The Witness exhibited a Map of the City of Newcastle.*) The Market section and the Market Wharf are connected down to the waterside, and the wharf has been given to the city and guaranteed to it in connexion with the Market.
7. Then I understand you to say that the proposed line of Railway will intersect the land appropriated for the purpose of a Market and a Market Wharf? Yes.
8. Are you acquainted with the area available for the accommodation of shipping in the immediate neighbourhood of the proposed Terminus at Watt-street? Yes, to some extent: As far as information can be afforded me it is very, very limited indeed.
9. From your acquaintance with the town, and residence there, do you conceive that the present accommodation, immediately opposite the proposed Terminus, is sufficient for the shipping that now frequent the port? Decidedly not. Even for the present amount of shipping it would be inadequate.
10. Then, if it is insufficient for the accommodation of the present amount of shipping, is it not a natural presumption that the demand for additional shipping accommodation will be increased as soon as the Railway is in operation? Yes.
11. And therefore the existing accommodation will be still more insufficient? Still more insufficient.
12. Are you aware that the Railway Commissioners propose a double line of Railway from Honeysuckle Point? I am.
13. One a line for goods and passengers, upon a level with the existing road, and the other a line for the coal trains, at a considerable elevation? Yes, an elevation of twenty feet: The level one for passengers, and the upper one for coals and goods.

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14. Will not the construction of a double line of that description entail very considerable expense? No doubt.
15. Do you conceive it is necessary that a double line should be constructed? Certainly not. I may add to that, the construction of such a line would exclude the city even from a site for its further extension when required—backed up, as it is on the south, by an elevated range extending from east to west—the lower line requiring a fence of not less than eight feet high, to protect parties from the consequences of traversing it, and the upper line, twenty feet high, would make it a complete barricade; so that between the two the present city would be completely shut in.
16. Have you considered the question whether any other Terminus to the Railway could be adopted with advantage to the public? Yes, with immense advantage to the city itself.
17. Will you have the goodness to describe to the Committee the point at which you think the Railway would terminate with the greatest amount of advantage to the public? This point (*pointing to the map*) is Honeysuckle Point, and the Commissioners, or the private Company who originally had it, selected that site for the Terminus, as not intersecting a single street, or interfering with the great thoroughfare right through the city from east to west. It has a water frontage, from which the Commissioners contemplated running out a jetty, by which they proposed to reach deep water; therefore admitting its eligibility in the first instance. This jetty has subsequently been demonstrated to be ineligible, in consequence of its crossing the current of the river as it comes down, and the tide again as it comes up.
18. The Commissioners, as you describe it, originally proposed that the Terminus should end at the jetty from Honeysuckle Point? Yes.
19. Will you have the goodness to describe the point at which you think the Railway might terminate with the greatest advantage? I would reserve the Honeysuckle Point, and have the Terminus for the Railway in its immediate vicinity. Between it and Bullock Island, from about the Australian Agricultural Company's shoots, there arises a sandbank, the margin of which is uncovered at low water, and is well defined. This bank, if retrieved, in conjunction with Bullock Island, would be all Government property, with the exception of forty acres, and would amount to something like six hundred and forty acres of land. This bank would then give, if piled along its margin, two miles of water frontage—the water in conjunction with that being the greatest in extent, and the most expansive of deep water the whole harbour contains. I find this (*referring to a sketch*) is a correct copy of the depths of water from Mr. Moriarty's plan—and we have no data equal to his with respect to the Harbour of Newcastle—and I find at low water spring tides we have twelve, twenty-one, and twenty-five feet water along the margin of that bank. I conceive that would be of the utmost importance in keeping vessels afloat under their cargo. There is a vessel, the "Edmond," just arrived with Railway cargo, and she will have to lighten that cargo from want of water and a proper wharf to lie at, and she regrets now that she came to the harbour for that reason. This bank, when reclaimed, would form a beautiful curve round the harbour.
20. If the edge of this sandbank were piled, and an embankment sufficiently wide constructed, it is your opinion that the water to be found there would be sufficiently deep for almost any ship? I believe so.
21. Would the accommodation for anchorage be sufficiently large for any anticipated increase in the number of ships? Decidedly—and that is the only direction in which it can be extended if necessary. On the other side of Bullock Island there are almost ready made wet docks.
22. Have you ever considered the means whereby the interval between the line of the edge of the sandbank and Bullock Island could be filled up? By piling its margin, and causing vessels coming in with ballast to put that ballast behind that piling.
23. How are these vessels to approach so as to discharge their ballast? Very easily, it being deep water; and with the piles in front, they would have moorings to hold on by.
24. Do you think it would involve very considerable expenditure to reclaim that swamp or sandbank? The expense would be very considerable, but at the same time it would be reproductive. I would here state that from Brown-street on the west to Zaara-street on the east the city is bounded, but its original boundaries extended to Cottage Bridge, which is a distance of a mile from the present boundaries. This street, Brown-street, bounds the city in that direction, but if the city should be extended to its original boundaries this plot of ground opposite Honeysuckle Point would be exactly in the centre by admeasurement.
25. How much land do you calculate would be reclaimed by carrying out your proposed plan? Six hundred and forty acres, the value of which would be very great. Wright and Randle bought land in this immediate neighbourhood at the rate of £2,500 per acre, close to Honeysuckle Point, at the Company's last sale. This reclaimed land at the lowest estimate would be worth £1,000 an acre, from its being central and having water frontage, for already it has sold at the rate of £1,200 per acre with water frontage.
26. Then, with respect to Bullock Island, it is your conviction that the value of that reclaimed land would be infinitely greater than any expense incurred in reclaiming it? Yes; I believe every pound spent in reclaiming it would return ten.
27. Are you of opinion that if that land should be reclaimed it would interfere with the channel of the river in any respect? It would improve it, decidedly, by bounding the current, and thus causing it to have greater power for the removal of obstructions.
28. What is the length of the line from the Australian Agricultural Company's shoots to the northern point of Bullock Island? Two miles by admeasurement. There is another fact in regard to this land, and especially in regard to your question as to the expense of reclaiming it, which I should like to notice. You have it in evidence that Bullock Island is five feet below the level of Honeysuckle Point, and, consequently, would require a large amount to fill it up to a level. Now I have had the testimony of a Government Surveyor who has taken the levels, and I find that from its centre it is two feet higher than Honeysuckle Point, rising to its northern extremity all the way.
- 29.

29. *By Mr. Flood:* Are you aware of the cause of the Government altering the site of the Railway Terminus from Honeysuckle Point to the site at present contemplated? I know of none, except that exception was taken to carrying out the jetty three quarters of a mile across the currents to approach the deep water lying in conjunction with Bullock Island. . . . W. Brookes, Esq. 7 Jan., 1857.
30. Have you not heard that it was partly in consequence of the enormous sums demanded by the proprietors of land in the neighbourhood of Honeysuckle Point? I have knowledge that Mr. Barker made such a reply in the Assembly; but with regard to that matter, I am arbitrator between the Government and the greater proportion of those parties who have interest in the land, and claims originally sent in for £17,000 I am enabled to reduce to £5,000.
31. Then the whole of the claims would not exceed £5,000? The whole of the claims I am interested in would not exceed that amount; and I believe all the others, with perhaps one exception, might be reduced in the same proportion, so that the sum originally asked as compensation might be reduced to one-fourth.
32. I allude to those persons who claim compensation for land resumed, or about to be resumed, by the Railway or the Government? Do you mean for the fee simple—for there are two distinct interests: there are the trustees of this land which was purchased for the purpose of a proprietary school, or something of that sort, who have put in a claim for the fee simple; and there are tenants who obtained leases from the Bishop of Newcastle, under an authority which he was presumed to possess, who have sent in claims for compensation for the loss of their interest in the land.
33. Including all claims of whatever nature, my question is—have you heard that it was partly in consequence of the exorbitant demand made by the parties interested in the land which it was necessary to resume that the Commissioners of Railways abandoned the intention of forming the Terminus at Honeysuckle Point? I have heard that stated as a reason, but, as far as my own individual opinion is concerned, I do not believe it was the reason of the alteration.
34. Can you inform the Committee what is the extent of those demands? The whole sum demanded amounted to something like £70,000 or £80,000. The original demand was at the rate of £1,500 per acre, but they asked leave to amend and set it down at £2,000. That may be alleged as the ostensible reason, but I do not believe it to be the real one; besides, the Commissioners would be protected against imposition by arbitration.
35. You have stated that although the public would be put to some considerable expense in the construction of a jetty——? Not a jetty, in reclaiming the sand bank and Bullock Island.
36. Still that expense would be repaid in consequence of the enhanced value given to the Crown Land at Bullock Island? Decidedly. I believe that the sum that could be realised from that land would not simply pay for its own reclamation, but would pay for all the improvements that the harbour requires; and I have taken some opinions on the point. I believe, moreover, that the Government has not an inch of land within miles of the city itself, for the very land they propose for the Terminus at the sand hills is not really Government property in the hands of Government. It was said that seventy-three acres could be reclaimed at the sand hills, but there is not an inch of Government land there but what a previous Government has sold or appropriated for the recreation of the inhabitants. From their own map of the 6th May, 1856, I find that fact set forth.
37. Can you give the Committee any estimate of the works necessary to reclaim the land you propose to fill up, so that shipping could come alongside the jetty and load and unload? That is a point I am incompetent to decide. I have heard many different opinions, but I think evidence may be procured better than mine. I have heard it estimated that £20,000 would do the front piling, and the rest might be done by ballast. I doubt that, but supposing £50,000 would do it, and it would give £100,000 in return, I think it should be done. It is essential in other respects to the future prospects of the city itself, because this is the only direction in which it is possible for the city to extend. Indeed it is extending rapidly that way now, for I find, after having had the numbers carefully taken, that there are one hundred and eighty houses within, and two hundred and sixty seven without the present city boundaries, yet within Cottage Bridge on the west and the Potteries on the south. The Government having no land whatever near the city, and the Australian Agricultural Company's bounding it within these narrow limits, I conceive that whatever may remain of this land when the railway purposes are satisfied, would be an admirable endowment for a city having now no endowment, nor a yard of sewerage or pavement or anything of the kind. It is impossible that any ordinary amount of taxation within the area of the city could give it what it requires in these respects.
38. Supposing the Terminus were constructed at Honeysuckle Point, would it be necessary to have a second line of Railway, as is proposed under the present arrangement? Decidedly not. The Terminus would be in the centre of the city's new boundaries, and yet, from jutting out from the main land, it would not interfere with a single street, and will be equi-distant to all parts of the city in any direction.
39. Are you aware how the Government intend to allow the inhabitants to cross the passenger line? Only by having gates at the different crossings, and allowing them to cross at certain periods. My view is that that will enhance the permanent cost if they are to have proper watchmen, and if otherwise it will be exceedingly dangerous.
40. Do you think it would be safe to leave the gates at any time without a watchman? Unquestionably not.
41. To see that the inhabitants did not cross except at the proper periods? Yes. I can quite understand that the trade of the port would be very much interfered with, as well as the convenience of passengers by the steamers. For instance, if a train happened to be a little late, the watchman, in accordance with his orders, might not allow any one to cross, and therefore the passengers would be delayed, as well as the drays, and every one concerned.

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I know at home such a thing would not be allowed. On the North-Western Railway the goods' station is not brought into the town; at the London end it is at Camden Town; and at the other end, at Liverpool, the goods' terminus is at Wapping; and in order to give a terminus for passengers it is approached by a tunnel under the town of Liverpool. When the Government sold these forty acres on Bullock Island, there were so many applications for it—parties wanted to get it, seeing the prospective value of it—that the Government wrote to an official at Newcastle for his opinion as to the propriety of selling it, and who returned them for answer, not to sell it, because its value would be great and incalculable to the city, in a variety of ways.

42. I suppose you would not undertake to give an opinion as to the cost of the additional length of Railway between Honeysuckle Point and the proposed Terminus in the city of Newcastle? I am aware of what the estimate of the Government is, but I believe it would not more than half do it.

43. *By the Chairman*: The estimate is £70,000? Yes; because when they come past the Queen's Wharf, past the foot of the sand hills, they speak of reclaiming. Now there are said to be eight feet of water there occasionally, which a vessel of considerable tonnage could come in and lay for repairs, and they would have to fill that up.

44. *By Mr. Flood*: Will the line as proposed to Watt-street interfere in any way with private property, except the right to go to the wharf without interruption? Yes, it will; it crosses through many allotments of land.

45. Do you know the value of the land it will be necessary for the Government to resume, under the present arrangements, beyond Honeysuckle Point? Some of it must be very valuable.

46. Can you give the Committee any approximate estimate of the value of that land? I should say land along there would be worth at least £2,000 an acre.

47. Do you know how many acres it will be necessary to resume? No; it is a mile in length. What the Australian Agricultural Company might ask for their paddock I do not know. I only know that rumour says they intend to ask a very high price, because they would have a severance claim in addition to the value of the land resumed. It would be the same with regard to Honeysuckle Point, if they propose to take only such an amount of land as the line will occupy. Arbitration would give the parties a right to severance claims nearly amounting to the value of the whole of the land, because the Railway cutting the land in two, and having no approach but by crossing the line on a level, would deteriorate the property, inasmuch as it could not be approached with the same facility as it is now. Therefore, the Commissioners would have to pay nearly as much for the severance claims as if they bought the whole of the land, and this would arise from the peculiar position of the land, and the manner in which the line will traverse it.

48. Supposing the chief Terminus was at Honeysuckle Point, would it be necessary to continue the present coal shoots within the city of Newcastle? Certainly not.

49. The accident that occurred the other day was on one of the coal companies' railway? The Coal and Copper Company's line.

50. How far from the City of Newcastle? About a mile and a half. That railway crosses the Maitland Road, on a level with the main thoroughfare of the city.

51. Did the accident occur in a position where a traveller could see any considerable distance along the line? Yes. The train was perceived, but being down an incline the man had no control over it when in motion. It was without horses at the time, and his break was not sufficient to stop it.

52. I believe it was a female who was driving the cart? A female was driving a cart and crossing at the usual crossing place; the horse had one foot on the line, and the individual who ran to the rescue got thrown across the line, and was killed. When they use locomotives on this line as well as on the Agricultural Company's line, it will be exceedingly dangerous for the traffic of the city to be crossed by locomotives, over which they will have less control than at present, with horses.

53. *By Mr. Weekes*: Is there any possibility of the town extending beyond or around the contemplated Terminus at Watt-street? None. Where the Terminus is proposed to be at present, the sand hills immediately surround it, and are continually being added to from the sea and blown over into the harbour now the outer fences are again in such bad condition. Houses have been buried under the sand—for instance, one belonging to the Collector of Customs—when I say buried, it was pulled down because they were afraid of its actually being buried. There is a roadway marked on this plan which is also buried.

54. Then in what direction must the town extend? On the west. Outside the present city boundaries, from Brown-street towards Honeysuckle Point, within three years and a half two hundred and sixty-seven houses have been erected, while there are not more than one hundred and eighty within the city during thirty years. All the manufactories—Rodger's Foundry, the Patent Fuel Manufactory, and the Australasian Bank—stand outside the city boundary, all in anticipation of the future progress of the city.

55. Then the further the town extends the further the main body of the inhabitants will be removed from the Railway Terminus if it is placed at Watt-street? Just so.

56. Is not the proposed Terminus at Watt-street at the narrowest point of the harbour? Decidedly so.

57. And immediately at the entrance? And immediately at the entrance.

58. It is hemmed in, is it not, by a sandbank, leaving a very narrow channel between the sandbank and the wharf? Yes.

59. Would not the establishment of the proposed Terminus there lead to an accumulation of shipping in that locality—both colliers and other kinds of shipping? Decidedly.

60. Would not that, in so narrow a passage, be a great detriment to the harbour? I believe so.

61. Are you aware whether the Railway Commissioners contemplate loading coals at that Terminus? I believe so.

62. As well as a general goods' Terminus? Yes. I believe they intend to act as common carriers. I may remark that the Queen's Wharf is almost knocked to pieces, as well as the Circular Wharf, and the westerly winds prevailing during three-fourths of the winter, render it dangerous for a steamer to come up to where they propose to load. I conceive that it would be exceedingly dangerous for a sailing ship to come there, or, if lying there, she must rub herself against whatever she is moored to, in a way that would prove very destructive.

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63. Would not the consequence of several vessels lying in tiers be that great damage would be done to shipping? I believe so. Besides, when this channel is blocked up, continually vessels will have great difficulty in threading their way, and in avoiding the sandbank, when this is made a loading place. I can scarcely conceive it possible that vessels can work in and out without continual damage accruing.

64. Is there any considerable extent of the deep water you refer to at Honeysuckle Point? I believe from this point of the sandbank to the northern portion of Bullock Island it is two miles, and the expanse from there to the North Shore to Fisher's Point is half a mile across. The various depths are given on Mr. Moriarty's map.

65. Nearly the whole of that space of water is deep? Yes.

66. Varying from what? From twenty-five feet to fifteen, eighteen, and so on.

67. Is that spot protected in any degree from the prevailing winds? I conceive so, inasmuch as instead of driving a vessel on the bank they would hold her from it. If a south wind came she would lie with her head on to it. It is in every way more eligible with regard to the prevalent winds.

68. Is the channel leading in the direction of Honeysuckle Point from the entrance to the harbour of such a character that it would be at once available for shipping? Yes. This channel (*referring to the map*) the steamers pass through, and also ships.

69. Have you considered the objection raised to a jetty projecting from Honeysuckle Point into the harbour? Yes.

70. Do you consider that the objection holds good as to its detrimental effect on the harbour? I think it would be decidedly objectionable. I think a jetty constructed to cross the currents would cause a deposit. The collision with the piles would at once cause still water, and a deposit would be formed. When there is a fresh in the river it brings down a great quantity of matter in suspension.

71. Then how would you propose that vessels should load at Honeysuckle Point? There would be no necessity for a jetty, vessels being able to lay alongside the reclaimed land.

72. You stated that the Market Wharf had been guaranteed to the city? Yes.

73. By whom? By a former Government.

74. Was that previous to sales of land by the Government—is there any official dedication? Yes, of the Market Wharf, and of the ground reserved for a market. It is marked on the Government maps as reserved for the use of the City.

75. Do you think any claims for compensation will arise from parties possessing land in those streets that will be cut off from access to the water, if the proposed Terminus be carried out? I know claims have been made.

76. I am not alluding to claims arising from the Railway passing through property of parties, but to claims made in consequence of access to the water being cut off? Parties have claimed a right of water frontage to all these allotments from Watt-street to Brown street.

77. They claim compensation for the loss of their water frontage, consequent upon the Railway intercepting it? Yes. I am aware that on an appeal to the Government, it was decided that they had no title to such water frontage, while in one instance the Surveyor's Office proposed to compensate one individual by allowing him to take in certain land which had become available by a different alignment of the street, and which adjoined his own, in lieu of any other compensation for the loss of his water frontage. At least so it has been stated to me.

78. Are you acquainted with the depth of water at the proposed Terminus at Watt-street? I am.

79. Would it require any extension of the wharf to enable ships of large tonnage, laden, to come alongside? Yes; there is at a very small portion a depth of twenty-seven feet—at one spot—a kind of hole; but in which not more than two vessels could lay.

80. *By Mr. Buckley:* You referred in a former part of your evidence to a sand bank, which you pointed out on the map, between the Agricultural Company's shoot and Bullock Island—is that bank very precipitous? Its sides are. At its upper margin there is a shoal, but not a very extensive one.

81. How near would vessels be able to come in its present state, without piling or any artificial embankment? Without piling I think they would not be able to approach very near. I find fourteen feet of water within about—I hardly know what distance to say. I find nine, seven, and twelve feet I may say close up to the bank.

82. How many feet from high water mark, would that depth of twelve feet be? I should say a considerable distance. I can hardly answer that question. Mr. Moriarty would be the best evidence on these points.

83. What distance would you suppose that twelve feet depth of water is from high water mark? I should say about twenty yards, probably.

84. There is sufficient space for vessels to swing? Yes; there is half a mile, varying from nine or ten feet in depth to twenty-five.

85. And a good anchorage? And a good anchorage.

86. You were saying that in the event of a wharf being constructed between the Agricultural Company's shoot and Bullock Island, it would form a crescent? Yes.

87. You stated it as your opinion that it would scour out the blind channel? Yes.

88. Where is that blind channel now situated? Round here (*pointing to the map*). All the steamers go up there now.

89. In the event of a large body of water being turned by the construction of that wharf into



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into that blind channel, would there be no formation of deposit any where else in the harbour? It is not probable. It would form a complete crescent, and as the water came in from Nobby's one way, it would have a direct line round this crescent, and the same with the current of the river.

90. There is no probability in your mind of a bank or bar being formed at the very entrance to the port? No.

91. Have you had much experience with bar harbours? Not a great deal.

92. Would not the action of the tide from the ocean meeting the current from the river be likely to create a deposit at the mouth of the harbour, in the same way as in the Clarence, and other bar rivers? I have watched a very interesting matter in connexion with that very point—I mean the fresh red water coming out and the green water coming in. I have watched them meet in the centre of the harbour, where the struggle between them commences, the water from the sea taking a convex line, and the other taking the two channels on each side. The fresh water cannot oppose the sea water on account of the greater density of the salt water, and therefore it runs away on either side. When the tide is going out the harbour is full of red water, and I have seen it pass Nobby's for two miles, completely red, and with a line as well defined as any on this map.

93. Have you observed any deposit to take place? I believe it would be general, but I know of nothing to induce me to believe that by removing this obstruction any deposit would take place in any other part of the harbour. I believe the effect of the tide would prevent it. I see no reason at least to believe that it would create a bar harbour, but rather the contrary, by giving additional freedom to the tide.

94. From what you know of the matter, is it your opinion that by constructing the harbour in the form of a crescent it would be diverting the waters from their natural channels? No, it would simply be following nature. Nature indicates in the spot referred to that this is the proper channel; and removing this obstruction which art has thrown out in her way, and giving her more freedom, by constructing this embankment, would not in any way divert or interfere with the natural channel.

95. What, in your opinion, is the cause of the immense depth of water opposite Bullock Island in comparison with other parts of the harbour? I believe that being in a direct line with the sweep of the river the current has come with considerable force, and so cleared that particular part.

96. The water at present flows over the spot you propose should be hereafter reclaimed? Yes, at the same time giving the water a natural direction as well as giving it scouring power.

97. In the event of that embankment being formed, you think it will be quite sufficient to deepen the channel and to keep it so without dredging? I do believe it probable dredging might be adopted to get up the rubble stones, ballast, and the coal which have fallen into it. I have seen tons of coal and stones go into that channel, and the interstices of those stones have been filled up by the sand ballast which has fallen in, till it has formed into a hard bed. That might be removed by dredging, and then, I believe, the current would be the most efficient means of keeping the channel clear.

98. What length of piles would be sufficient to give the depth of water to which you refer? I should say the piles would have to be of very considerable length. I scarcely know whether I am competent to state precisely the depth. It belongs more to the province of the engineer.

99. What, in your opinion, is the formation through which the piles would pass in the event of their being driven there? I believe the surface formation is sand and silt mixed, and that there is a good bottom below that.

100. There is no solid rock below that? I believe not.

101. In the event of that being piled, what would be the position of vessels going in to discharge their ballast—how would you propose to keep the ballast up? It might have a facing behind the piles. I know at Stockton-on-Tees there have been hundreds of thousands of tons of ballast deposited; it has deepened the river considerably and reclaimed acres of land. Very heavy fines are imposed if ballast is not thrown there.

102. Supposing the Terminus to be at Honeysuckle Point, how far would it be to the wharf which might be erected at the deep water—how far would the Terminus of the Railway be from deep water? Some very small distance, say a few hundred yards.

103. Three or four hundred yards? Yes.

104. How do you propose conveying goods from the Terminus to the steamers or sailing vessels? This mud-bank would form a continuation of Honeysuckle Point.

105. Would you conceive it to be necessary that that Railway should come to the very edge of the wharf? I do not consider it necessary unless the Railway Commissioners intend to become common carriers. I consider merchants and shippers would make their own arrangements in this respect.

106. How would you communicate then with vessels lying in deep water? Let the merchants who would have the storing of the goods take it into their own hands. If the Railway is to have the loading and storing of goods, it would be doing the business of the merchant. I know great objections exist against Railway Companies at home becoming common carriers.

107. Would there be sufficient facilities to enable vessels of large tonnage to go up there to load in the event of merchants constructing their warehouses on the wharf? Yes, there might be.

108. And then you conceive that would be much more desirable as a place of shipment than any other place in the harbour? Than any other place I can conceive, it having a much greater area of water, and a depth equal, if not greater, than any other portion,—being also so central, commencing just where the city, population, and commerce will go, yet not interfering with the streets near which the commercial population at present reside. This is the only

only direction in which a commercial city can extend and is extending; all the manufactures Newcastle knows are there; and it is the site of a population greater than that within the city itself. The land has been opened up, and upwards of £70,000 worth of property put on it within five years, and mostly purchased by an industrious population engaged in manufactures, and in the labor of the district.

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109. Is it your opinion that there would be any great inconvenience to the present City of Newcastle to have the Terminus at Honeysuckle Point? No. I believe it would be the most eligible spot, as it would be equi-distant from the most populous parts of the city.

110. Do I understand that by far the greatest amount of goods would be required by the inhabitants who live in the neighbourhood of Honeysuckle Point? I would hardly say that, at present.

111. But by far the largest amount of goods sent to Newcastle for the future will require to be landed at Honeysuckle Point, for the convenience of the inhabitants? Yes.

112. But the largest importers at present reside in the city? I think so.

113. By the construction of this wharf here, you are under the impression that no artificial channel would be created in any way? I think not. I think it will be the removal of the obstructions that are already there, and therefore it will be an advantage, in fact.

114. As the construction of a Railway would be an advantage to the inhabitants of Newcastle, and particularly to those parties through whose land it must run, what was their reason for making such exorbitant demands for compensation as they appear to have done? This land would not be advantaged by merely being cut in two by a Railway. It was originally bought for a proprietary school in reality. The then Bishop of Sydney made an advance to complete the purchase money, and obtained some rights over it that are yet unexplained.

115. This was previous to the existence of the Bishopric of Newcastle? Yes. The Bishop of Newcastle coming into his diocese, and finding this land, in which the Society for the Propagation of the Gospel was interested, through the Bishop of Sydney lending their money towards its purchase, called a meeting, and let it out in allotments on leases for twenty-one years; with that view he gave warrants of attorney to an agent; but it was ultimately discovered that he had no right to give these leases. Poor people went there, however, and commenced to occupy the land; and when the Railway comes to be constructed the question of title arises. The question with the Railway Commissioners is, who are we to pay. The trustees repudiate their liability to these tenants, although they stood by and allowed the Bishop to do this, and never said a word against it until now. The tenants are now so sick of the whole thing, that for claims put in originally for £17,000, they are now willing to accept £4,000 or £5,000; and I believe the whole of the claims which have been made for land taken by the Railway may be reduced in the same proportion. I have a claim here which I am going to place in the hands of the Railway Commissioners, and although it originally amounted to £6,000, the party is willing to take £1,000; and another of upwards of £5,000, for which the parties consent to accept £1,000.

116. You think that is as much as they are fairly entitled to? Not as much as they are fairly entitled to, but as much as they will take under the circumstances as between them and the Commissioners, but without prejudice to any further claims they may have against the Bishop or any other parties.

117. What was their object in making such a high claim in the first instance? They did so believing that their interest in the land bore that relative value.

118. What was the reason for reducing the claim? Simply to facilitate the settlement of this question, having no legal yet an equitable claim. The Commissioners recognise their equitable claim, and only refuse to pay until by some arrangement with the trustees they can do so in justice to the tenants, and with ample security to themselves.

119. I think you stated that there were some private reasons for the removal of the Terminus from Honeysuckle Point to Watt-street—would you be disposed to give us those private reasons? There are, no doubt, a great many parties interested in property near the sand hills. For instance, Morehead and Young, it is said, have taken the Lighthouse hill on a lease, to get coal. There are also parties who have property in Watt-street, in close proximity to the proposed new Terminus, that have certainly petitioned for the Railway to be there. As individuals you cannot blame them, but viewing the thing as I do, who have no interest in property at either place—simply with regard to the progress of the city—it seems to me a most preposterous thing.

120. You think then that there has been some private influence at work? I do.

121. Is it your opinion that the section of land that you propose should be reclaimed by the construction of this wharf, would be worth £640,000? It would be worth more; for if the land of the Australian Agricultural Company has been sold, immediately round it, at the rate of £2,500 an acre—if for Honeysuckle Point itself the trustees ask £2,000 an acre; and if Mr. Croasdill has bought land at Bullock Island at the rate of £1,200 an acre—if that land has realised that price in its present isolated state, what shall it be worth when connected with the main land, and with the very centre of the city, surrounded by all the manufactories in it?

124. If the Terminus was at Honeysuckle Point, how far, about as near as you can tell, would the centre of the two hundred and sixty-seven houses erected beyond the boundaries be from it? They would be immediately surrounding it on all sides.

123. Supposing the Terminus was at Honeysuckle Point, how far would it be from what you call the city proper? It would be about equi-distant from both portions of the population.

124. The traffic from Honeysuckle Point to the city proper would not be sufficient to warrant the construction of a cheap branch line? Certainly not.

125. You were saying that if the Railway is carried to Watt-street it would be highly inconvenient, for shipping to be supplied with water—would there be no means of constructing pipes to have the water carried above or below the Railway? There might be, but

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but that involves the question of the water supply to the city. There are no available means at present of supplying water in that way. The source of supply at present is a deep well in the Harbour Master's Yard, and they must cross that level crossing to bring the water to the shipping.

126. You referred, I think, in some part of your evidence, to severance claims—what part of Honeysuckle Point would the Railway sever? The severance I referred to was this, that by far the greater portion of Honeysuckle Point would be left without any approach but that by water, except by crossing the Railway level. No one would occupy that property for a residence, where there was a family, or for commercial purposes, on that account. Leaving so large a portion without any eligible access enables and entitles parties to such a claim for the deterioration of the property, a very large proportion of what it would be worth if resumed altogether.

127. Is it not your opinion that it will be very materially enhanced in value if the Railway intersects it in that way? Certainly not. It is one of those cases where a severance claim would be allowed. In the case of the Earl of Lichfield the point is illustrated. His Lordship had become overwhelmed with debt, had retired to the Continent without hope of being enabled to retrieve his fortune in his lifetime. The "Trent Valley Railway" required to go through the "Shugborough Domain," the family seat of the Anson's, in Staffordshire, and the line passes right through it, and in sight of the Hall at a distance; and for this severance, together with the land required, the Earl received an immense sum, sufficient to enable him to return. In the case of Lord Crew's land, on the "London and North Western Railway," it was unoccupied land in the midst of green fields, and the Railway immensely benefited it by bringing population to it. Perhaps ten thousand people are settled down where otherwise there might not have been one. In this instance his Lordship gave the land for the Station, which is very extensive, as their manufacturing depôt, and the result has been the formation of a considerable township. This land, however, would be deteriorated, from having no access except across the level line. No man would take it for a residence, because he could not pass in and out when he liked, nor at any time without danger.

128. You were speaking about the Railway intersecting the Company's paddock? Yes.

129. The Company's paddock would not be interfered with by having the Terminus of the railway as you propose? Not an inch of the Company's land would be required. They would not have to buy another inch of land, all this (*pointing to the map*) being their own. And I conceive that the amount of money it would require to extend the line one mile to the sand hills would pay for the piling necessary to reclaim this land, which once paid for, this land would be reproductive, the other, never, so far as the public are concerned, while by fixing the Terminus at the sand hills they would be resuming from the inhabitants the land formerly granted as a place of public recreation.

130. Would it facilitate the shipment of coals if the Terminus were fixed at Watt-street? No; because the Australian Agricultural Company have their own staiths on their own land.

131. We are told that they have made overtures for the Government to load for them? It is not true nor probable, as far as I have ascertained, that either the Australian Agricultural Company, or the Coal and Copper Company, should do so. Mr. Brown is on his way home with money to bring out locomotives for the Coal and Copper Company, and the Australian Agricultural Company's locomotives are here already.

132. Then you think there is no prospect of their making use of the Railway? Never. I have it from parties who have every opportunity of knowing the facts.

133. The staiths they are now using are on Government land, are they not? The Coal and Copper Company is guaranteed a right of way by Act of Parliament, and they have always had an impression that they have a right to the wharfs they use. The Coal and Copper Company are determined to resist being compelled to load with the Railway Commissioners; that I am quite satisfied of, after the inquiries I have made on this head. And the Australian Agricultural Company intend, if the question of this extension were settled, to put up additional staiths for the supply of a considerably larger quantity, and upon their own premises. I have it from the manager, that he would put up three more staiths immediately if this question were settled; but he does not know how it may affect the position of the company as yet.

134. Can you inform the Committee how it was that the one individual to whom you referred in a former part of your evidence obtained compensation when all other parties were refused? He has not obtained compensation for any land resumed by the Railway, but in writing with reference to the claim for water frontage the Government say, first, that he has no claim, and, in the next place, I believe, that although he was not entitled to compensation for this water frontage, he may take in and include with his land some additional space resulting from a different alignment of the streets—some fifty feet one way and thirty feet the other, I think.

135. *By Mr. Rusden*: Will you state to the Committee what the trustees of the land at Honeysuckle Point ask for the fee simple? Their renewed claim is £44,000—at the rate of £2,000 per acre.

136. Can you state what the tenants ask? They did ask £35,000.

137. What do you think will cover that expense? About £9,000—say £10,000.

138. Do you know the exact extent of land at Honeysuckle Point belonging to the Church and School? Twenty-two acres. There was some misunderstanding about that originally. Eighteen acres were only taken by the company.

139. The Government, at any rate, even if the Railway Terminus is at the sand hills, must take a portion of these school lands? They must take a portion.

140. How much? I cannot say.

141. So that they do not get rid of the claim by altering the Terminus? No, and they will have to pay more enormously for what they do take.

142. Therefore it is a question for this Committee to entertain, what will be the difference of the cost? I think that is a very essential point. I was arbitrator for a party in whose land a severance had taken place, similar to this. I have no hesitation in saying that this severance would be a very important consideration with me. But if an adequate crossing was obtained by which the property would not be so much deteriorated, that would be another consideration on which the claim could be reduced.

143. I think you stated that houses and roads have been buried in the sand at the proposed Railway Terminus? Yes, roads buried and houses removed.

144. Is not a great part of Scott-street covered with sand between Pacific and Zaara streets? Yes.

145. Have the allotments marked on your plan "Fisher" and "A. W. Scott," to the north of Scott-street, on either side of Zaara-street, ever been built upon? Never.

146. Are they so sandy that they could not be built on? They are a complete bed of sand.

147. It is quite a question whether this land covered with sand will ever become available to the city by covering it with grass? It is a question.

148. Has the sand gained ground on the soil? Not much there of late.

149. A portion of it has been laid down with grass? Yes, protected by outer fences. But the money has been utterly wasted—unless the fences are renewed and kept up, which is not the case at present.

150. The attempts hitherto made to recover portions of this sand hill have not succeeded? They have not succeeded—not but what they might succeed. I believe it is possible to stay the sand, but if it be reclaimable it will be useless for commercial purposes, looking to the whole interests of the city, and to the fact that Newcastle is destined for a commercial and manufacturing city.

151. The reclamation of the six or seven hundred acres of land, as you propose, at Bullock Island, must be a work of time? Decidedly.

152. How long do you think it would take? It would be hard to say.

153. Ten or fifteen years? I think it would be possible before that period to reclaim a sufficient quantity to bring it into use.

154. When a sufficient width of ballast has been laid along the line to enable a roadway to be made, might not the Railway then run along that line, and ships be loaded and unloaded, the reclamation of the land being a work progressing concurrently with its use? Yes, it might progress concurrently with that.

155. The reclamation of the sand hills, which the Government now propose, would also be a work of time? Yes a considerable time.

156. In either case the work must be a work of time? Yes.

157. Seeing that eventually the land at Bullock Island, if reclaimed, will be of such incalculable advantage to the city, the population extending that way, and, taking into consideration the large profit to be derived from its reclamation, the land proposed to be reclaimed at the sand hills bearing no comparison in value, you think it would be better to keep the Railway Terminus as it is at present, at Honeysuckle Point? Decidedly.

158. Why would the construction of the jetty at Honeysuckle Point, which it is proposed to carry out to deep water, be objected to. I will state why I ask the question, because, if it is carried to deep water it will extend as far as the land you propose to reclaim, and, therefore, I should suppose it would help, in some degree, the reclamation of this land; but two or three parties have stated that it would be highly objectionable—why do you think it objectionable, seeing that it goes out to the very line you propose to reclaim? While the water is permitted to flow over that bank it would give a different set to the current, and then I can readily believe it would cause a deposit.

159. But the water would pass under the piles? It could not pass without coming into contact.

THURSDAY, 8 JANUARY, 1857.

Present:—

MR. ARNOLD,  
MR. BUCKLEY,  
MR. FLOOD,

MR. JONES,  
MR. PIDDINGTON,  
MR. F. T. RUSDEN,

MR. WEEKES.

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

William Croasdill, Esq., called in and examined:—

1. *By the Chairman:* I believe you are resident at Newcastle? I have resided there since 1831.

2. Are you acquainted with the proposed extension of the Hunter River Railway, by the Commissioners of Railways, from Honeysuckle Point, through the City of Newcastle, to Watt-street? I have had a plan exhibited to me by the Government Engineer. I am aware that such a plan has been proposed. I originally proposed the same measure when the Hunter River Railway Company was first formed. I proposed to the then Committee this very site for the Terminus, and I believe the proposition was only lost in their Committee by a casting vote—so I heard.

3. That is the Terminus at Watt-street? The Terminus at Watt-street. I consider the Terminus is beyond Watt-street, taking in a large portion of the shallow space of the harbour. There is a large tract of shallow water which is useless in its present state, and which belongs to the Government.

W. Brookes,  
Esq.

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W. Croasdill,  
Esq.

8 Jan., 1857.

W. Crossdill,  
Esq.

8 Jan., 1857.

4. Will not that proposed line intersect all the streets of Newcastle that run to the edge of the harbour? The streets running into the harbour, that line will intersect them.

5. Every street? Every street running into the harbour. I am speaking with the presumption that the streets are intended to run to the waterside. All that run from the south to the north will be intersected by this Railway.

6. Do you not think such an intersection as that will be a serious interference with the access from the town of Newcastle to the water's edge? No, I do not. On the whole consideration of the subject I am disposed to believe that it is so much a shipping place, and that it will be as well accessible, even though the Railway is laid down there, as though there was none—as though horses and drays were travelling up it. I consider, myself, that a locomotive going down there, under command, would be less objectionable than the numerous horses with their waggons on the trains, which they have now to bring down the coal on.

7. Then I understand you to say that it is your opinion that to run that Railway with locomotive power is not likely to be so dangerous to the public as a mere roadway for common purposes with horse power? Exactly so.

8. Then you do not think that if such a Railway is constructed with a double line of Railway, one of which would be for the purpose of delivering coal, at an elevation of twenty feet above the road level, that that would interfere with the convenience or comfort of the inhabitants of Newcastle? I think it is a very important matter that it should be carried out. The space in Newcastle Harbour is exceedingly limited, and by that railway plan, the elevation which they shoot the coals in must of necessity amalgamate the whole shipping of coals to one contracted point, instead of occupying a very extended area. It will be the interest of all parties to avail themselves of that means of shipping their coals; in fact, so limited is the space of the harbour of Newcastle that I consider it is in this position you increase the accommodation if you could go up three or four stories, in the same way as building a cottage or a five-story house within a limited space.

9. Will not the inevitable result of fixing the Terminus in the neighbourhood of Watt-street be to direct the shipping to that point of the harbour? I cannot answer that exactly, further than by an explanation that all large ships, under any circumstances, whether the Railway is at Honeysuckle Point or at Watt-street, will be in the deep water part, which I take to be from Watt-street in a curved line round to Nobby's, which will take in the whole of this flat space of ground (*pointing to a sketch on the table*), and on which will be constructed the large warehouses for receiving imported goods, and the Railway then will be in the immediate proximity of these, and where the steamers arrive. The other space of ground, the harbour frontage, in the vicinity of Honeysuckle Point, I take it will be taken up by small coasting craft.

10. May I ask you whether, in your opinion, the accommodation for shipping in the neighbourhood of Watt-street is sufficient for the purposes of commerce at present—is there sufficient anchorage accommodation in that part of the harbour, in the immediate neighbourhood of Watt-street, for the purposes of the shipping at present? That is the only space in which large ships can anchor and swing at their anchors—opposite to Watt-street.

11. Is that sufficient, in your opinion? Quite so.

12. Do you not think that, as soon as the Railway is completed to Newcastle and in operation, the commerce of the City of Newcastle will very probably increase? No doubt.

13. In the event of that anticipated increase in the commercial importance of Newcastle, the number of ships, I presume, frequenting the port will also increase? No doubt of that.

14. Then, in the event of such an increase as may be reasonably expected, do you consider that the accommodation for ships lying at anchor in the immediate neighbourhood of Watt-street will be sufficient? Looking at the distribution of the quantum of space for all commercial purposes of shipping, it will be divided in the manner I have said. The lower part will be occupied by the very large vessels, the next part of the space taken up for the shipment of coals, and the market and inter-colonial vessels will occupy the remainder.

15. Have you considered whether any other part of the Harbour of Newcastle could be made available for the anchorage of large ships, in addition to that particular portion you describe now? My belief is, that when all the facings for the outlines of the harbour are constructed—and with an enormous amount of expense—the whole of the inside of the harbour, a great portion of which is now a sandbank, may in course of time be removed; in fifty or a hundred years—I do not know how long it may take—and then the whole of that space will be available for ships of large tonnage.

16. Without reference to such a remote period as fifty or a hundred years, but with reference to the possibility of requiring a great increase of shipping accommodation, have you turned your attention to any portion of the harbour, besides that in the immediate neighbourhood of Watt-street, that would afford additional accommodation? I do not think any other part of the harbour would afford such accommodation without an enormous expenditure; and all marine surveyors are almost at a loss when they come to meddle with sand. You may create two evils by removing one.

17. Have you considered the possibility of establishing any Terminus at Bullock Island? If I had had the striking out of the line I should have come right across Bullock Island to where it is now proposed to fix the Terminus, and also have had a resting point on Bullock Island. I do not think you could make a Terminus, under an enormous expense, on Bullock Island—not a standing Terminus.

18. Then you have not considered the question of Bullock Island as a Terminus at all? I have considered the question in every relation for the last twenty-five years, and I was a large shareholder in laying out the Railway at the first onset; and when it was proposed to the private Company to have the Terminus where it is now proposed to be, and, as I thought, determined to have it at Honeysuckle Point, I actually purchased land at Bullock Island at £400 an acre with that view. I must observe also that I am one of the trustees for that land at Honeysuckle Point.

19. Is it your opinion that the Terminus could be advantageously placed at Bullock Island? W. Croasill, Esq. I do not think so.
20. Are you acquainted with the flat, liable to be covered by sea water at high tide, between Bullock Island and the Company's ground? Yes, quite well. I have been watching it almost every week for the whole time I have been there. 8 Jan., 1857.
21. Is it your opinion that it would be practicable or impracticable to carry out an embankment from the Australian Agricultural Company's land to the northern point of Bullock Island with a view to reclaim the intervening space of ground between Bullock Island and the embankment? I do believe it is perfectly possible to redeem the whole of that flat; I have always contemplated it; but it is a work of time—it must have time. By any means which could be used the expenditure would amount to so large a sum as to make it quite—not to be thought of.
22. Have you calculated with precision, or anything like it, a given sum as an estimate of the expense of carrying out an embankment to the northern point of Bullock Island from the coal shoots? I do not think any one can give you a precise estimate. Persons who profess to do that may find it will require three times what they expect.
23. You cannot give an estimate? Not a precise estimate. If you ask me in round figures—I have generally found my bird's eye view come nearer the mark than precise estimates—I should say you could not carry out a permanent way there, at the present price of labor, under seventy or eighty thousand pounds.
24. *By Mr. Jones:* You speak now of an outside embankment? Carrying an embankment out, you know, from Honeysuckle Point.
25. *By the Chairman:* Does your estimate refer to reclaiming the whole of the land? I would set that down at half a million. I should take time to be the principal ingredient in securing that—time and skill. But to lay down this, the expense would depend a great deal on what you mean to face it with.
26. Presuming that the embankment is constructed by ballast from colliers and other vessels, and fronted with piles? You cannot use piles there, because of the cobra. I have known a large pile as thick as my body to have been ruined in ten months at the Company's shoot by the cobra, so that it snapped in two.
27. *By Mr. Arnold:* Could they not be covered with copper? This piece was not, but that would be a great expense. If you are going to lay down ballast, and then to pile it with coppered piles for that mile down, I would say it would cost two or three hundred thousand pounds. I do not believe any one could give you an estimate of that.
28. *By the Chairman:* What is your idea of the value of land in that neighbourhood—either at Bullock Island or in the intervening space, provided it be reclaimed? I have given £400 an acre, with the view that the Railway would stop at Honeysuckle Point.
29. How much land do you think might be reclaimed there? There is a large tract. Viewing it off the hill, I have estimated that flat at two hundred acres—one hundred and fifty to two hundred acres—by a guess at it only.
30. Are you acquainted with the level of Bullock Island in reference to the main land? It is low, the whole of it. I have been on it.
31. Are you acquainted with the fact whether it is lower or higher than the level of the main land? Which portion do you mean?
32. Opposite Honeysuckle Point? The lower portion of Bullock Island at high spring tides is under water, and I should take it that Honeysuckle Point is higher than the average level of Bullock Island.
33. *By Mr. Jones:* By how much? I do not know what the upper part of Bullock Island may be. I should think it is the higher of the two.
34. *By the Chairman:* Taking the average? From the knowledge I have, being often over it, I believe Honeysuckle Point is higher than the average level of Bullock Island. It might be a foot or two.
35. *By Mr. Jones:* By two feet or ten? It is not ten feet—oh dear, no. This is an accumulation of sand itself within a given period, this Honeysuckle Point. But the water flows all round Bullock Island, and into it, in all manner of ways, at spring-tides. I should imagine myself that Honeysuckle Point is two or three feet higher than Bullock Island. There might be in that extent some little portions of Bullock Island where there is a little rise run up. I should not think there is a difference in the whole of Honeysuckle Point, between one point and another, of more than six feet.
36. With reference to the proposed extension of the line from Honeysuckle Point to Watt-street, you consider it will be no interference—that the inhabitants will incur no inconvenience from a double line—one line twenty feet above the level of the road, and the other on a level—and that no danger will result? I should feel my children much more safe in travelling up and down Hunter-street when the locomotives run than they are now. In fact, I never allow them to go there, from the danger. There is about as great a nuisance as can possibly be at present, from the bringing down of coals on tramways drawn by horses, driven by ruffians greater than the notorious bullock-drivers. I have property which the locomotives will come past, and which I do not consider will be in any way objectionable on that account.
37. Do you anticipate that the line of Railway to Watt-street will be guarded by a fence or be left open? I should imagine they will put a fence on the town side. I should think that would be sufficient.
38. Will not that fence interfere in a great degree with the access of the inhabitants of the old City of Newcastle to the water? I should consider that it would no more preclude their access to it than in other similar cases; for instance, in the case of the Railways upon the Tyne, at Newcastle, in England, where the lines run up on each side of the river. It admits of the same regulations, which are well known to Railway people.
39. No doubt there will be points of access, but independent of those points, the inhabitants will

W. Crossdill, will be cut off from communication with the water by a fence, I presume? I do not know what they will put there.

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40. If a fence is put there it will have that effect? Notwithstanding, I should consider one or two points of access will be sufficient for the accommodation of the inhabitants.

41. If a line of Railway be carried along as proposed by the Commissioners, twenty feet high, will not that have the effect of completely shutting out the inhabitants almost from a sight of the harbour? It is to be presumed that the value of land at Newcastle near the harbour, is founded on the belief that it will be shut out from a sight of the water by the masts of ships, and by Railways too; that Newcastle is not to be a pleasure port at which to run down bathing machines, but a dirty place of trade—in coals in particular.

42. Did you ever know of any town in Europe where a line of Railway was carried along the entire longitudinal boundary of the town next the harbour, cutting off the population entirely from intercourse with the harbour, excepting at certain points? Railways were not much in existence when I left England. I can only speak from the report of those who have seen Railways laid down in the same sort of way; and I am told that Newcastle-on-Tyne is in the same position; there is a Railway up each side of the river. But that I know nothing about personally.

43. Do you consider Honeysuckle Point an eligible point as the Terminus for a Railway? I consider it the next eligible point. I was called upon in 1842, by the then Bishop of Sydney, Dr. Broughton, to value that piece of land, as a selection for a college; and as he thought the site was not eligible, he asked me whether I considered it could be sold or exchanged, or what was the value of it; and my estimate was then that in seven years time, from 1842, it would be worth £22,000, irrespective of any value which might arise from a Railway being laid down from Newcastle. I mention this to shew that I considered it likely, in 1842, to be taken as a Terminus. But I always considered that the more eligible spot was this point down here, Watt-street, which I recommended to the Committee of the Hunter River Company. Mr. Scott and I are trustees for that land at Honeysuckle Point, purchased for the purpose of erecting a college.

44. Was it purchased by the contributions of the public generally? By the contributions of a given number of persons.

45. Have the trustees been applied to, to surrender that land to the Railway Commissioners? I have left almost the whole management of it to Mr. Scott, as I am going out of the colony shortly, but I believe they have been applied to, and the Commissioners have in fact taken possession of the land.

46. Do you know what price has been asked or claimed by the trustees, of whom you are one, for the land at Honeysuckle Point? I am not able to say; I left that to Mr. Scott. I have thrown it so much into his hands that whether it is £1,500 or £2,500 per acre I do not know.

47. Are the trustees in possession of the land at Honeysuckle Point? No.

48. Can you inform the Committee who are in possession of the land? I cannot, further than that I believe the Government to have taken possession of it—that is, the Railway Commissioners.

49. Are you aware whether there are any other persons besides the Government in occupation of that land at Honeysuckle Point? There are some parties on the land under an assumed authority from the Bishop of Newcastle; they have procured leases from him.

50. But the trustees gave these parties you allude to no authority to hold land under lease? None at all.

51. Can you inform the Committee how the Bishop of Newcastle came to assume authority he did not possess? With all deference to the Committee, I presume this is travelling out of the matter I came here to give evidence upon. I submit I am not called upon to answer questions of that kind—not that I have any objection to do so, but I do not feel myself fully in possession of the facts. I have not borne them all in my mind.

52. You can state positively that you, as a trustee, did not give—and you have no reason to suppose your co-trustee has given—any one authority to hold land there under lease? Certainly not; I can speak of that.

53. You cannot give the Committee any idea of the value fixed upon this land by the trustees, although you are yourself one of the trustees? I have surrendered that to Mr. Scott. I do not know whether it was £2,000 or £2,500. I know I have given at the rate of £8,000 an acre for land within a short distance of it.

54. What is your opinion of the value of the land at Honeysuckle Point? I say £2,500 per acre. I have given £8,000 per acre within half a dozen stones' throw of it. I take it that that increased value of £8,000 per acre arose from the circumstance that the Railway Terminus was expected to be there, and I bought with that expectation.

55. Do you know, as a matter of fact, who let the land at Honeysuckle Point? I think it seems so extraneous—

56. I merely ask the question because you mentioned the Bishop of Newcastle? I do not wish to enter on anything of the sort; but I have no objection to state, what is well known by report, that the Bishop of Newcastle leased land to various parties there, on the assumption, I believe, that he had a right to do so; but it was a hasty measure, and it appears he had no right.

57. Are you aware whether any of the persons who occupied this land, whether legally or not, ever claimed compensation? I have seen statements that they have sent in claims for their leases; but I do not know it as a positive fact. I have seen lists of what they claimed, with the sums, and all that; and I have every reason to believe they sent in their claims. There is no question about it that they did all put claims in—or the greater part of them, and their claims were discussed at a meeting of the Commissioners of Railways.

58. Are you acquainted with the length of the leases they hold under? I am told that it was fourteen years.

59. Have you any objection to state whether you are of opinion that they have any equitable claim, apart from a legal claim, for compensation? I think, as a matter of opinion, that these parties should be remunerated for the outlay they have made—purely the outlay—not upon any estimate of value made in such a way as this: "I have laid out £100 in putting this hut up, and I let it for a pound a week, that is equivalent to £50 a year, and therefore my interest is worth £500." I mean purely upon an estimate of what they have laid out. So far as I am concerned I should be very sorry to see it otherwise, when the parties have taken the land in ignorance, and the Bishop also let it in ignorance of his want of right to do so. They never saw whether the Bishop had any title.
60. Against whom, in your opinion, have they a claim for compensation? I am not prepared to say where it should come from at all. I have no hesitation in expressing my belief that these parties should be remunerated for their outlay. I believe one man who put in a claim for several hundreds of pounds subsequently sold his right, title, and interest for £40. All the claims they put in were of so exorbitant a nature that if they had been deprived of their leases without compensation they would not have been much to be pitied.
61. *By Mr. Flood:* Irrespective of law, you consider that in equity they are entitled to compensation? As a party interested I should like to see all of them repaid the money they have actually laid out; and that should be ascertained by valuation, not by the enormous claims they have sent in, but if two parties mutually commit a blunder, I do not see how equity can justify the infliction of pernicious results on a third party.
62. *By the Chairman:* Do you think any claim they may have should be preferred against the trustees? I am not prepared to give an opinion. I think the trustees should be guided by their solicitor and their trust deeds.
63. You state that they should be compensated—I want to know whether you think the trustees should afford them compensation? I cannot answer that question.
64. Should the Government give them compensation? It is so mixed a question that I am not prepared to give an opinion upon it.
65. You estimate the fee simple of the land at about £2,500 per acre? Yes.
66. Do you not think that these parties, if they held valid leases for fourteen years of land of that value, would have derived a right to a considerable amount of compensation? All that depends on time.
67. Taking your estimate of £2,500? That depends on time, and what kind of buildings are erected. We often find land estimated at £2,500 an acre, which is of no value, and remains so, unless you lay out many thousands upon it.
68. You estimate it at £2,500 without any buildings on it? When I estimate land there at a given sum it is all with reference to time. I have given at the rate of £8,000 an acre for land near the same place, and it is lying idle.
69. What is your opinion of the value of land at Honeysuckle Point, without buildings, at the present time? I would say £2,500; I would give that for it; but it would have reference to its increased value by time.
70. *By Mr. Arnold:* I think you have told us that the value of land on Bullock Island is now about £400 an acre? I mean to say I gave £400 an acre for it, with the expectation that it would be worth a thousand.
71. You did not give more than it was worth? I gave more, I believe, than other people would have given at the time.
72. If a line of wharfs were carried out between these two points (*pointing to the map*) the land on Bullock Island would be very much more valuable than it is now? As to filling the whole of that up, that is rather a question. I have water frontage there at present, and this would shut it off; and I should suppose I would be entitled to compensation for that water frontage.
73. It is shallow water at present? I can get an eight or ten ton boat up there now.
74. Are you of opinion that the construction of a line of wharfs according to that plan would add to or detract from the value of land on Bullock Island? It would make it all valuable. There is no access to it at present at low water.
75. There would be then? Yes.
76. It would give additional value to Bullock Island? No doubt.
77. In what degree do you think that land on Bullock Island would be increased in value by that line of wharf being carried out? That has reference to time. If you could tell me there would be ten thousand inhabitants at such a time, or twenty thousand at such a time, then I might be able to give you an estimate.
78. I am asking you with reference to your own estimate of the increased population of Newcastle, in consequence of the greater facilities being given to the shipping interest there? I think it will be some time before all this additional accommodation will be required. I think there will be space enough down here for a considerable period of time.
79. That is not exactly the question. I am supposing this line of wharfs carried out, and I ask what additional value would, in that event, be given to Bullock Island; looking to the present circumstances and future prospects of Newcastle, do you think it would be doubled, in value? I think my £400 an acre may lie unproductive for the next ten years, and then, of course, I ought to have £800. There is a reference to time in all these cases. There is abundant space for carrying out these intentions; and skill and time may bring these hundred and fifty or two hundred acres into the hands of the Government.
80. I wish to know what you would consider the value of the land, supposing this line of wharfs could be constructed? I understand your question, and I can only answer it by saying that there is so great a reference to time and circumstances, that I can give no positive opinion. Having facilities would not create commerce.
81. But, I suppose, those facilities have reference to the requirements of commerce? Not its immediate requirements. They may have prospectively. There is abundance of room without all this for a very long period.

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82. By not creating the wharf the value of land in that particular part will not be increased, but you cannot tell us what value will be given to it by creating the wharf? I do not think you can give it any additional value till the time arrives for using it.
83. Do you think that Bullock Island if it were sold now in its present state would fetch as much money per acre as it would if that line of wharfs were constructed in the manner shewn on the plan? The very certainty that this was to be done would create an additional value.
84. If there were no prospect of this wharf being done at all—if it were determined to make the wharfs in another place—would Bullock Island be worth as much money as if these wharfs were constructed? Certainly not.
85. Can you not give us anything like an estimate of the value of the land on Bullock Island if this plan were carried out? I cannot answer that question.
86. Would it be worth ten times as much? I cannot give you an opinion.
87. Nor twice as much? I cannot give you an opinion.
88. You hold land yourself on Bullock Island? I do.
89. What additional value would you be inclined to set on that land in consequence of the erection of these wharfs? I could not put a great additional value on it in my own mind, although, very probably, I should get a great deal more given for it.
90. Supposing a line of wharfs were erected in the way proposed in that plan, what do you imagine that line of wharfs, with sufficient ground in the rear for the erection of warehouses, would be worth per foot frontage? I cannot give any idea.
91. What is the general value of wharfage property in Newcastle with frontage to deep water? That would not give you deep water—not in the same way. In fact, they must bring it out so far as to endanger the harbour, to what I call deep water. I have in my possession a copy of the Marine Surveyor's Report, which was got by the Company, on the whole bearings of the question—the depth of water, its effect on the harbour, and every thing else—I allude to the report of Mr. Cornelius Lundy.
92. Then you cannot give us any idea at all of the value of the frontage of a wharf of that sort? No; I think there are so many uncertain circumstances on which it would depend.
93. Would it be of any value at all? I think it would. There is no question about that.
94. You cannot say whether it would be a thousand pounds or a thousand pence? Extremes of that sort are neither here nor there.
95. Can you give me the value, or anything like the value, of wharfage property at the present time in other situations? In the deep situations—I think I can.
96. What is the value per foot? I should think it is worth in certain situations—say from Bolton-street, I think they call it, round to the deep water extending down towards Nobby's—about £100 a foot, with a good depth, taking time and circumstances prospectively into consideration, and that large ships of seven or eight hundred tons would be able to lie alongside there, and nowhere else in the harbour.
97. What is the character of the land on Bullock Island—is it alluvial land? It is muddy sand, I should call it. There are creeks running in mixed with it. No doubt the whole of that space will be reclaimed in course of time. There is one point in favour of the Terminus at Watt-street, namely, that it is there all the steamers come, and the greater portion of the traffic. I take this northern line to be the communication from the whole of the Northern Districts to Sydney. If Newcastle were Sydney, the centre and capital of the country, it might be some consideration whether we should have the Terminus in the centre of this large space (*pointing to the map*). But all the traffic is now where the steamers come up alongside, and if passengers and goods have to go a mile after leaving the train to reach them, there are two or three large links out of the chain of communication.
98. I think you said that although you cannot form any detailed idea of the expense of carrying out this line of wharfs, yet you have sufficient reliance on your general idea to say that it would cost at least one or two hundred thousand pounds? Do you mean to ask me for an opinion with reference to the filling in of that space with coppered piles and ballast?
99. Yes; the expense of creating a sufficient space for a line of wharfs? In the expense of creating fifty or sixty feet of breadth, if it is to be lined with piles, and those piles to be all coppered, I think half a million of money would be swallowed up. I would speak of it in that extensive shape. But if you were to ask engineers, some of them would say one hundred thousand pounds, others, two hundred thousand, and others again, perhaps, three hundred thousand. None of them would agree.
100. Half a million would be the very outside calculation? I think it ought to be.
101. You have not reckoned that at £100 a foot—this reclaimed wharf frontage would be worth £790,000? I am speaking of £100 as the value of deep water frontage here, (*pointing to the map*) which you never can make it there. You have room for a thousand ton ship at one place which you never can have at the other.
102. *By Mr. Flood:* What would be the depth of water at Honeysuckle Point, supposing these improvements were carried into effect? It is marked here as seven feet. They cannot bring it out so far. This was the objection when the Company contemplated it lower down.
103. *By Mr. Arnold:* I was going to ask you if Honeysuckle Point is abandoned as the site of the intended Terminus, and the Terminus is carried on to Watt-street, what would then be the value of Bullock Island—would the value of land on Bullock Island be as great as it is now? I think not.
104. In fact the property you bought there would be deteriorated? I reckon it is nothing but time that will give it increased value. I bought it merely in this way—when a person has a few hundreds to spare and lays it out for one of his younger children.
105. *By Mr. Rusden:* I think you stated that it would be necessary to sheath the piling with copper? It must be.
106. Is it not probable that by the time the piling was eaten by the cobra the ballast would settle

settle sufficiently not to require its support, and therefore the expense of coppering might be saved? No ballast would make that an even edge. The harbour is suffering from that very cause at the present time. You must have it faced with something.

107. Is there not a good deal of deep water opposite Bullock Island? The deep water is so far over, that if any communication were brought out to reach it, the current coming against the wharf would form a deposit in that curve all the way round.

108. Is not Bullock Island the property of the Government, excepting the portion you have purchased? Except twenty acres. I have only one acre, or thereabout, out of the twenty. They have stopped all further sales there.

109. Are you aware whether there is any correspondence with the Government existing, the subject of which is, that on a report of the valuable nature of the ground there the Government declined to sell any more of it? I am not aware of anything of the sort; but there came an order to sell no more land there.

110. The Government have given an order to that effect? I do not know; there are general conceptions that there must have been some authority.

111. It is common report? Yes.

112. You still hold the acre you purchased there? Yes.

113. Are not the Termini of Railways for goods generally placed centrally and not at the water's edge, or on wharfs, in England, for instance? I am not able to say. I left England before Railways were adopted. I am told they are down both sides of the river Tyne, at Newcastle, in England. I can give you good evidence about Railways, by a Railway Engineer, just out from England, who comes from Newcastle-on-Tyne, and who has told me that.

114. Can the town extend now at the sand hills—allotments have been bought there and have never been built on; they are a perfect bed of sand, and cannot be built on, I think you said? I do not mean to say they cannot be built on, but they are all sand.

115. Will not the town extend around Honeysuckle Point, and has it not already extended very much in that direction? It has extended considerably in that direction, and in other directions.

116. Will not carrying the Railway along the water frontage, to the sand hills, interfere with the comfort of the inhabitants, and the use of the Market Wharf? I should say not; I would rather have it.

117. Have you not, though a trustee, declined to have anything to do with the management of the land at Honeysuckle Point? You must excuse me answering questions with regard to my trusteeship.

118. I ask this because it has been reported that the difficulties in connexion with this land induced the Government to look out for another Terminus? I am not aware of any difficulties that exist.

119. In settling this business with the trustees and the present tenants it is said the Government saw so much difficulty in the way, from the exorbitant prices they asked, that the Government were compelled to look out for another Terminus? I do not know the why or the wherefore; I do not know of any difficulties.

120. I want to shew that the difficulties which existed in reference to the Terminus at Honeysuckle Point made it necessary for the Government to look out for another? I consider that if they have got land of their own for nothing, they may relatively consider the advantage, and look out for that.

121. It is not positively ascertained that this does not belong to the Government? They must pay for it if they have it.

122. Was it bought from the Government originally? Yes.

123. What was the original price given? I think it was £800 or £1,200; I rather think it was £800.

124. And now I understand the present demand is £60,000—£80,000 by the trustees, and £30,000 by the tenants? Demanding that is absurd, because I am quite certain that £1,000 would buy all the material and labor, barring an iron house, expended by the tenants.

125. You do not wish to answer the question as to—though a trustee you declined to have anything to do with the management of the land at Honeysuckle Point? I have not declined, but I have left it more to Mr. Scott, from inability to attend to it.

126. Before these difficulties arose, the Government and the public generally, with one consent, approved, or seemed to approve, of Honeysuckle Point for a Terminus? Then you must not make me one of the public, for I always disapproved of it. I can produce a number of persons who wanted it at Honeysuckle Point because their interest was there.

127. No one objected for a considerable time? I am not aware.

128. The Government got a lot of timber for piling laid down at Honeysuckle Point? There is a lot of piling there, but I do not know who it belongs to.

129. There is an immense lot of piling squared and ready to form the jetty? I thought it was the remainder of what had been used in making a causeway.

130. We have it in evidence that this timber was purchased by the Government for making the jetty, and was carried there by the Government? Very likely.

131. My next question goes to say that therefore it would be a reasonable deduction that if these difficulties could be overcome, and removed, it would still be considered the most eligible place? Certainly not.

132. How many ships can now swim or anchor in deep water at Watt-street? I cannot say. Here is the space at which they anchor (*referring to the map*); but when this is formed vessels may then lay all along it.

133. I mean at the present time? I cannot tell you.

134. Have not the steamers occasionally come into collision with ships that have been anchored there? When ships have been allowed to get out of their proper places there have been collisions.

W. Croasdill,  
Esq.  
8 Jan., 1857.

- W. Croasbill, Esq.  
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135. The Harbour of Newcastle at present is confined and small—would not the Terminus if constructed at the sand hills tend to drive all the traffic and wharfage to one point? Oh dear, no. My idea is that it will make that division of it which I have stated before—one place for large ships, another for the export of coals, and another for steamers and small colonial vessels.
136. Do the small colonial vessels now use that portion of the harbour? No, they cannot generally use it, being mostly occupied by larger vessels.
137. Not above where the colliers go? They are mixed in with them.
138. There is a great difficulty in warping one vessel past another there occasionally? There is a narrow part where vessels drawing fourteen feet cannot warp.
139. As you have been an officer of the Australian Agricultural Company, what do you think the Company would be likely to require for compensation, should the Railway run through its land? That is a very wide question, of which I can give you no idea at all. My belief is, upon Captain Brownrigg's own evidence, which he has given by his own surveyor, that the Railway can come through there without paying a penny, on account of the increased value it will give to the remainder of the land.
140. *By Mr. Arnold*: The advantage will be greater than the value of the land taken? Yes, decidedly.
141. How much of this wharfage property, at the other end of the town, belongs to the Government? The whole of this belongs to the Government, from Nobby's up to Watt-street.
142. Then none of the water frontage from Nobby's down to the coal shoot is private property? None. It is all public property, and will give an immense income at some future day.
143. *By Mr. Rusden*: You said that you looked upon the Hunter River Railway merely as the passage to Sydney? Sydney being the capital, I look upon that Railway as the means of communication with the capital from the whole of the Northern Districts, and that to make any break in it would be an injury.
144. Is it not contemplated to have large ships direct to Newcastle from England, without calling at Sydney? Yes; they will come as a matter of course, with the natural progress of commerce. It makes a difference of fifteen or twenty per cent. on a cargo, I should think.
145. It is contemplated to have it a direct shipping port? It is open now, and ships have come there from Great Britain direct.
146. Then I gather from your evidence that you are decidedly in favour of the Terminus being at the sand hills? I have thought so from the first. My opinion is decided that it should be there—though the greater proportion of my property is in the other neighbourhood.
147. You do not think these two lines, carried along the frontage, will interfere with the comfort of the inhabitants? I do not. When that is a coal shooting and shipping place, there will be no comfort in the question. It will be all for business, and as much a helter-skelter place of trade as the Circular Wharf, in Sydney.
148. *By the Chairman*: I think you stated that if the proposed line is carried through the Australian Agricultural Company's land it will enhance the value of the remainder? Of course, beyond whatever they take away. It will give it immense value, as is proved by the evidence of their Surveyor before the arbitrators between them and the Commissioners.
149. The same proposed line will run through the school land at Honeysuckle Point, will it not—it does now run through the Honeysuckle Point property? Yes.
150. Do you hold about the same opinion with regard to the effect of the Railway on that property? About in proportion to its extent. The Company have two thousand acres in their grant at Newcastle, and it will be benefiting every acre of it.
151. You do not conceive that if the Railway runs through the Honeysuckle Point property the remainder of that property will be enhanced in value? I do.
152. Then do you think the trustees have any right to compensation? I conceive they have a right, up to the point at which it was estimated in a correspondence I had with the Bishop of Sydney, irrespective of any increased value of the land through the Railway coming to Newcastle.
153. The same principle that you apply to one plot of land, you are not willing to apply to the land in which you are interested? I am willing to apply the same principle in a ratio to the extent of the benefit. But the benefit would be by no means equal, as the Company have a much larger proportion of land, and it would be giving them a bonus on the whole of their land, by bringing the town into connection with it.

FRIDAY, 23 JANUARY, 1857.

**Present:—**Mr. ARNOLD,  
Mr. BARKER,  
Mr. BUCKLEY,Mr. FLOOD,  
Mr. JONES,  
Mr. PIDDINGTON,

Mr. RUSDEN.

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

John Whitton, Esquire, called in and examined:—

J. Whitton,  
Esq.1. *By the Chairman*: I believe you hold an appointment as Railway Commissioner? Not as Commissioner, as Chief Engineer.2. You have recently arrived in the Colony? I came here in December only; I have been here about six weeks. 23 Jan., 1857.

3. Have you had any opportunity of inspecting the Hunter River Railway, more especially the Terminus at Newcastle? Yes.

4. Are you aware that the Railway authorities propose to extend that line by carrying it from Honeysuckle Point, through the City of Newcastle, to a Terminus at Watt-street? I think it is not exactly through the City of Newcastle but alongside the river. The city is bounded on one side by the river, but still there are no houses alongside the river.

5. It forms a portion of the city, whether built upon, or vacant? Yes, I believe it does.

6. *By Mr. Barker*: Does the line come anywhere below highwater mark? No; the line is above highwater mark, and consequently passes over lands which may be in the city, but there are no buildings on them.7. *By the Chairman*: Are you aware that the line proposed is intended to be a double line, one for goods and passengers upon the road level, and another, called a coal line, at an elevation of eighteen or twenty feet above the road level? I am.

8. If such a proposition is carried out by the Government, will not that double line be a very expensive one? It will.

9. Have you any notion of the expense of the extension of this line from Honeysuckle Point to the proposed Terminus at Watt-street? I have no means of knowing, except from the estimates which have been made by the Commissioners of Railways, or under their instructions.

10. Are you aware of the amount of those estimates? I think the total expense is set down at somewhere about £60,000. That includes the stations, engine sheds, and work shops.

11. Does it include the expense of rails? I believe it does.

12. Are you aware whether the proposed line from Honeysuckle Point to Watt-street, will run through any private property? I think it will run through the property of the Australian Agricultural Company.

13. You are not aware whether it will run through any other property? I am not aware.

14. Therefore you can give the Committee no information with respect to the amount of compensation that may be claimed by the owners of private property? I cannot.

15. If the proposed coal line, as well as the goods and passenger line, be constructed, will it not tend to barricade the town and impede the present communication with the harbour? It will not impede the present communication with the harbour, but if the Railway be carried to Watt-street there will be much better accommodation, and much better wharfage than at present. The present accommodation is extremely limited.

16. My question is directed to inquire whether the communication on the part of the population with the harbour, along the extent of the river, will not be impeded by a double line of Railway? If you assume that the whole of the frontage is now open, it will be impeded to that extent, but that is not the case.

17. Is not the frontage now open? Not for any practical use.

18. Do not the streets, running from south to north, run to the water's edge? They run towards it, but they cannot get there.

19. Is there any obstacle at the end of the streets next the harbour? Yes.

20. What obstacle? Pools of water, which cannot easily be got over. Embankments have been formed by throwing down ballast, where the water was too low for ships to come; these embankments have taken up a portion of the harbour, and the space behind them remains in pools of water.

21. The only obstacle you allude to, is the accidental obstacle of low ground intervening where they have thrown ballast? That is the obstacle which prevents any use being now made of the frontage you speak of.

22. Would it be difficult to make that frontage accessible and usable? That depends entirely on the extent of the wharfage, and the depth of water required.

23. I am speaking of its accessibility, not of the depth of water? It could easily be made accessible.

24. Are you aware that the population is extending westward, and that the city is longest from east to west? I am not aware of it. It struck me as an exceedingly small place.

25. You are not aware that the direction of the houses and the population is to the westward? I am not.

26. If a Railway with a double line is constructed and runs from east to west, will it not intersect all the streets running from north to south? It will not, in fact, intersect them, because the Railway will be made at the extreme ends of the streets. It can only intersect them provided you make a wharf along all the river frontage, and carry the streets down to it.

27. *By Mr. Flood*: It will intersect the proposed prolongation of these streets? I do not know

J. Whitton, Esq. know what the proposal may be. I know they terminate now some distance from the water's edge.

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28. *By the Chairman*: Are you aware that nearly all the inhabitants of Newcastle live on the land side of the proposed Railway? I am.

29. Will not the necessity of crossing the line to get to the waterside involve the risk of danger to the people of Newcastle? I think not. I know that there are towns in England where the population is forty or fifty thousand, which have main lines of Railway running through them. At Lincoln, for instance, there are two, the Manchester, Sheffield, and Lincolnshire, and the Great Northern, which both cross the main street on a level within a quarter of a mile of each other.

30. That may be an instance where it has become a matter of necessity that the Railway should run through the streets; but in the event of its not being absolutely necessary, do you not think it is desirable that the inhabitants should not incur the danger which must be attendant on such an arrangement? I do not think it desirable to make level crossings over public streets if it can be avoided, but I do not think this Railway can be said to run through the public streets. At Lincoln there were gates across the Railway which were always open to the street, except when the trains were coming in. But in the case of Newcastle, that objection only applies to the passenger line which would run on the level of the street. The coal line is entirely removed from any interference with the streets.

31. *By Mr. Barker*: By reason of its elevation? Yes, and by distance from those parts of the streets now used for traffic. These lines are beyond the streets.

32. *By the Chairman*: Is the proposed extension to be confined to the passenger line? No, the proposed extension for passengers will be nearest to the city. Beyond that will be the coal line.

33. Have you considered whether Honeysuckle Point is an eligible point for the Terminus of the Railway? It is quite the reverse. The only means of communication with the water from Honeysuckle Point would be by an enormous viaduct, which is shown on a plan I have here, (*the witness produced a plan of the jetty originally proposed to be carried out at Honeysuckle Point*), and which is a thing which would be so monstrously expensive that I cannot conceive how any person could contemplate it. There is an immense extent of piling. Of course, looking at this expense the first thing I should consider would be, where is the traffic to come from to pay for one tithe of this expenditure.

34. You have no other proposition that you think feasible, with a view to gaining access from Honeysuckle Point to deep water? There is no other plan proposed that I am aware of; and I think this is the only one you would be able to carry out if you fixed the Terminus there. I have seen nothing and heard nothing of any plan with reference to Honeysuckle Point, except this one of the jetty.

35. Are you acquainted with Bullock Island? I have seen it.

36. Do you know whether the level of Bullock Island is higher than the level of the high road? I think it is lower—I think its average is something lower; but I cannot speak positively.

37. Perhaps, from your limited knowledge of the Colony and the value of land in it, you are not able to inform the Committee whether, if an embankment could be formed from the Australian Agricultural Company's staiths to the northern point of Bullock Island, it might be made the means of reclaiming a large amount of valuable land, at a cost considerably within its value? I have sufficient knowledge of the country to know that it would be impossible to reclaim that land for anything like the value of it. If you were to reclaim this land, and put up an extensive wharf-wall, you certainly would have no need to come into Newcastle, but the expense of doing it would probably be ten times the amount of doing what I propose as sufficient for the present traffic. The only embankment that would stand would be one formed of very large stones, and until that became sufficiently consolidated you would have no means of making the wharf-wall.

38. Are you speaking now with reference to reclaiming the whole of the intervening land within the line pointed out, or to making an embankment of a limited width? I am speaking of forming an embankment and ultimately reclaiming the whole of the land.

39. My question was more particularly directed to the expense of constructing an embankment, of say thirty feet in width, along the line indicated? Still an embankment of that kind must be constructed of stone, not ordinary earth; and it would be enormously expensive.

40. Have you given the question any consideration, limiting the expense to the cost of the embankment? I have not.

41. Can you give the Committee any opinion with regard to the value of land in that locality? No.

42. Then how can you be in a position to say that the cost of this embankment would exceed the value of the land when reclaimed? I say so, because I do not conceive that the value of any land you could reclaim under the circumstances would be equal to the cost of reclaiming it. The worth of the land after being reclaimed could bear no proportion to the cost of forming this embankment. (Length two miles—height, thirty feet—land reclaimed, about three hundred acres.)

43. Still you cannot give the Committee any positive information as to the cost of the embankment? No, I cannot do so; and it would be very difficult to give an opinion as to the cost of it without obtaining more information than I have at present.

44. Will not an estimate of the cost of this embankment be a necessary foundation on which to calculate the probable repayment from the land? No doubt. The cost of the embankment, I know, would be enormously expensive, but I cannot give an estimate unless I knew the facilities for getting the stone to make it.

45. Then your opinion as to the expense must be founded on very doubtful premises? It may be so; but unless I have an opportunity of making a proper estimate, I can only give an opinion

opinion on what must be a very expensive work. You cannot make that embankment without stone, and the only place at which to get it is on the Nobby's side of the town.

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46. Should it be found that stone could be obtained from a more convenient spot, of course the expense would be reduced? This is the most convenient spot that I know of. Besides, it must always be a very expensive thing to construct an embankment in a tidal stream, where the foundation would be constantly liable to be washed away.

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47. *By Mr. Flood:* Then the expense would be increased or diminished should the river be found to be composed of quick-sand or rock? No doubt of it. Every one must be aware that to make an embankment (thirty feet high) in a tidal river must be a very expensive work.

48. *By the Chairman:* Would not such an embankment tend to diminish the amount of shoalwater at Newcastle, and increase the depth of the channel used for shipping? No doubt it would.

49. If such a result could be secured, would it not be an infinite advantage to the Hunter River district? No doubt.

50. With reference to the Terminus at Honeysuckle Point, might not private enterprise be relied on to convey passengers and goods between any part of Newcastle and the Terminus there? I think not, because it would deprive the Railway of a large amount of traffic. My own opinion is that if you stop at Honeysuckle Point, it will become a question for consideration whether it would be worth while to work the line at all beyond Morpeth. The Terminus being on the wharf is the only thing that will make the Newcastle traffic pay, and if it be not there I do not think it would be worth while to work the trains to Newcastle at all. The only traffic of any consequence that you could expect from Newcastle would be that brought by the steamboats from Sydney; and if the Railway is to have a chance of success, you must endeavour to make some arrangement by which the traffic of the steamers will be secured to the Railway.

51. Are you aware whether it is the practice of Railway Companies to become common carriers? All the Railway Companies in England are common carriers.

52. Yes, to the extent of their lines of Railway, but I do not think they carry goods and passengers to and from places in the vicinity of their different stations. For instance, does the Great Western Railway Company carry goods and passengers from all parts of London to their station at Paddington? The Great Western Railway Company collect all the goods they possibly can in London from any part of it, to their station at Paddington. All the Railway Companies do the same thing. In fact, many of them deliver their own coal.

53. But in all these instances the companies are private companies? No, the Railway Companies are public companies.

54. I mean private companies, as distinguished from undertakings under the control of the Government? They are not under Government control, excepting that there is a restriction that they shall not become merchants.

55. The Government do not contribute one sixpence to the construction of Railways in England? Not a farthing.

56. And they are, therefore, different from Railways in New South Wales? Yes; but still I think Railways in New South Wales ought to return a per centage on the outlay in their construction as well as the railways in England.

57. Are you aware that the Australian Company, and the Coal and Copper Company do not intend to use the proposed coal line? I am not aware of it, but my proposition is, that you should not construct the coal line at present. My own impression is that there is no traffic to make it pay. I do not see where the traffic can come from to justify an expense of the kind. The Australian Company carry their own coal, and unless some arrangement is made for them to get to deep water they would not use the Government line.

58. Then I understand that you differ from the proposition of the Railway Commissioners in one important point? I do not altogether differ from their plan, but I think the traffic is not yet sufficient to justify the construction of this coal line. I only suggest that it should be deferred for the present.

59. *By Mr. Flood:* It is a question of time? Just so. I do not think they have proposed anything at all impracticable or improper. I only say that to bring down the goods' line will be sufficient to meet all the requirements of the present traffic.

60. *By the Chairman:* If I understand you correctly, you conceive that no advantage would be gained by constructing the coal line at present? I think not. I do not see that any pits are open between Newcastle and Maitland, and unless the Australian Company would use this line I do not see why we should construct it.

61. Are you acquainted with the anchorage and shipping accommodation afforded by that portion of the harbour immediately opposite Watt-street? The plan I have before me shews a depth of twelve feet there, but the wharf is very small.

62. Have any idea how many ships could lie at anchor immediately opposite the wharf at Watt-street? No, I have not.

63. If it were possible to secure a more extended area for anchorage, would it not be a desirable object? No doubt of it. I think the only way in which the harbour could be really improved would be by constructing an embankment across. (*Witness pointed out the position on the plan.*) But what would be the expense of doing it I do not know.

64. *By Mr. Flood:* What do you suppose would be the probable cost of that? I should not like to give an opinion at present.

65. *By Mr. Barker:* I think you said the calculation of the expense of a double line included station-house and all that is required? That is the estimate, I believe. Of course, as I said at first, I have had nothing to do with that estimate.

66. You cannot say what would be the cost of the passenger line only? It would not be necessary to construct a line for passengers only. The goods line could be used for passengers as well as goods, and that would save the expenditure on a large passenger station at Newcastle.

67.

J. Whitton, Esq. 67. You have made no calculation of the cost of making a station at Bullock Island? I have not.

23 Jan., 1857. 68. Besides the expense of filling up the intervening space, there would still be the cost of the Railway, if it were carried to Bullock Island? Yes. And I think it would be a very difficult thing to construct a wharf to Bullock Island. So far as I can understand the experiments already made, it appears to me that the whole foundation is nothing but loam and sand, and as soon as the piles are driven the bottom is completely washed out.

69. That is the case with some of the works that are going on now? Yes. The only way to do it would be by constructing a stone wall. If an embankment were formed in the way I spoke of, they could not bring ships up alongside without doing something more; they could only come up to the base of the embankment.

70. You must have some wooden construction carried out beyond that? Yes; or take pains in forming the embankment, to give it a sufficient foundation to build upon.

71. You examined carefully when you were down the position of the two places where it has been proposed to make the Terminus, namely, Honeysuckle Point and the place where the Commissioners now intend making it? Yes. The first thing that struck me with reference to Honeysuckle Point was, how are you to get the traffic by the steamers from Sydney if the Railway stops there. Are you to unship all goods at the Circular Quay, put them in carts, and carry them to the Railway at Honeysuckle Point. If you were to do that the expense would be very great, besides the inconvenience to passengers; and the result would be, that instead of the steamers landing their goods and passengers at Newcastle they would take them on to Morpeth.

72. You think that unless the Railway can take the goods from the sides of the vessels at Newcastle it would be folly to come below Morpeth at all? Yes. That is an objection which applies to Honeysuckle Point, but it is one which the Terminus now proposed by the Commissioners is free from. Unless you can give equal facilities in that way elsewhere at Newcastle—and I do not think you can—this is the best place, and, in fact, the only place where you can fix the Terminus. If you leave out of the question the traffic between Sydney and Morpeth, the only traffic from Newcastle would be the goods and passengers actually belonging to the town itself; and I do not think it would be of the slightest use to work the engines below Morpeth for that traffic alone.

73. Then you think we should lose all the traffic from Sydney to Maitland? Yes, if you stop the trains at Honeysuckle Point.

74. Do we go through much private property after passing Honeysuckle Point? I think not. I think the Australian Company's is the only private property; but I am not able to speak very correctly on that point. I propose that at present you should only make one line, which would do for goods and passengers, from Honeysuckle Point to the Circular Quay, and leave the other lines until you find they are required.

75. *By Mr. Flood:* The estimate you alluded to, I think you stated, was some sixty or seventy thousand pounds—do you possess sufficient local knowledge as to the cost of material and labour, to inform the Committee whether that is an estimate that you would place any reliance on? I cannot give an opinion, because I have not taken out the quantities, or ascertained the cost of labour. However, I should assume that reliance can be placed upon it, because no doubt the person who made it would have gone sufficiently into detail to know what he was about.

76. Have you seen the section of the proposed goods' line from Honeysuckle Point to Newcastle Wharf? Yes; I have seen the section. The goods' line will be the same as the passenger line, until you get nearly opposite Bolton-street, and then it diverges, going down to the wharf, instead of coming into the town, as the passenger line does.

77. Then, it will commence to rise? No, it will rather fall.

78. I thought the goods' line was to be twenty feet above the level of the street? No, that is the coal line, which I suggest should not be constructed for the present.

79. I mean the coal line—have you seen the section of the coal line from Honeysuckle Point to Newcastle Wharf? I have.

80. Will not that be a most expensive thing? The timber framing would be expensive.

81. Where will it commence to rise? Opposite Wolfe-street.

82. What distance is that from the Terminus at the wharf? Nearly half a mile.

83. Will you inform the Committee how it is proposed to raise the permanent way twenty feet? The permanent way is proposed to be raised on timber piling for a portion of that distance, not the whole of the distance.

84. Will the £70,000 complete the coal line as well as the passenger and goods' line? That is the intention of the estimate; but I may say again that I have had nothing whatever to do with these estimates. They are Mr. Bell's estimates.

85. Nor do you possess sufficient local knowledge to say whether the estimate is such an one as can be relied on? I could not give an opinion upon it without taking out all the quantities and going into the other details.

86. Can you give the Committee any opinion whether the cost stated in that estimate would complete the work? I must assume that the person who took out this estimate took it out correctly. I have no means of knowing otherwise.

87. I think you informed the Committee that that estimate contemplates erecting all the buildings, turn-tables, and permanent way? Yes.

88. Is anything else included—the rolling stock? No rolling stock; the estimate includes the passenger station, the goods' station, and, I believe, a portion of the wharf-wall.

89. Looking at the expense the coal line would entail, you are not prepared to recommend the Government to carry into effect that part of the proposed works at the present time? I am not. I should recommend that this work be postponed, and that the only line to be made should be that for goods and passengers on the same level.

90. As you have not been able to discover that there is sufficient traffic for the purpose of employing a coal line? Yes. The Australian Agricultural Company have their own staiths, and unless they would cease using them, and send their coal by this line, it would not be worth while to make it; and I am not sure that the quantity sent by that Company would make it worth while. I have seen no attempts to open up large coal fields in the neighbourhood of Newcastle. J. Whitton,  
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91. Then, on a review of the whole subject, is it not your opinion that it was altogether a mistake to begin the line at Newcastle? Decidedly.

92. You consider that the line ought to have commenced at Morpeth? I do. I think the only thing that can ever repay the Government for making the line from Newcastle, is to give them every opportunity of getting the traffic from the steamers, and to prevent the steamers running in opposition, to Morpeth. Otherwise, it would be better to put up with a dead loss at first, than have a constantly accumulating loss, by running the trains without sufficient traffic to make them pay.

93. With respect to Honeysuckle Point, you think the idea of constructing a proper place for shipping and unshipping goods is out of the question, in consequence of the enormous expense? I do. Even assuming that there is the best possible foundation, I think it would be so expensive that the Government would not be at all justified in carrying it out; in the first place, it would require piles at the end of the jetty of about fifty feet long, to get to deep water.

94. *By Mr. Arnold:* Supposing your idea of abandoning the Railway from Maitland to Newcastle were to become an actual fact, I presume a great part of the materials would be of use in constructing the Railway upwards? I am not clear that you could take them up again; in England, if you once lay down a line you cannot take it up again.

95. What is the difficulty? The Government will not grant powers to make a Railway except upon condition that it shall not be taken up again.

96. But this is a Government Railway? The question was raised the other day, at a meeting of the Committee on the Sole Commissioner of Railways Bill, and Mr. Barker, the solicitor, thought that it would not be fair to the public to take up the line after it had been once laid down.

97. *By Mr. Weekes:* If keeping it down entails further loss to the public, the public interest requires that it should be taken up? I do not say that it would be unfair to the public generally, but I fancy you would not be able to convince the people in that neighbourhood that it is desirable to take it up.

98. *By Mr. Arnold:* I think you said that if the Railway between Newcastle and Maitland did pay it would be at the expense of the Steam Navigation Companies. Whatever the Railway gained the Steam Navigation Companies would lose? No, it would not be to their loss, because if the steamers did not do the work they could not expect the pay.

99. The traffic that would go by the Railway would otherwise go by the river? The greater portion of it, no doubt.

100. Are not the interests concerned in the river traffic as great as those concerned in the traffic by the Railway? I do not know that they are not, but if an arrangement could be made with the steamers it would be a convenience to both. If both run at the same time there will not be traffic enough to pay them.

101. One must give way? Yes. I think the interests of the public would be better served by the Railway than by the steam-boats.

102. Are you at all acquainted with the circumstances of the localities on the north and south sides of the river; I mean as to the relative proportions of traffic that come from each, and the amount of inconvenience that would be caused by the discontinuance of the river steamers? You can never make any extensive alteration without inflicting inconvenience on somebody, and it may cause some inconvenience to some parties to lose the steam-boats on the river.

103. The settlers on the north side can receive no convenience from the Railway on the south side? No, unless they keep their own boats, and bring themselves across.

104. If the Railway monopolises so large a proportion of the traffic as to cause the withdrawal of the steamers from the river, those persons residing on the north side, who now have the advantage of steam communication, would lose it altogether? They would lose the services of the steamers that run there now.

105. *By Mr. Barker:* Of course, if these large steamers were not to run upon the river as they do now, other small boats would be laid on, to take the intermediate traffic? If the amount of intermediate traffic would justify the running of small steamers no doubt they would be put on the river; and perhaps that would be an advantage, for I have understood that the navigation of the river is rather difficult for the large steam-boats that are running now.

106. I think you said the public would be better served by the Railway making arrangements to take the traffic from the steamers at Newcastle? The public would be better served, because the Railway would be so much quicker than the steamers.

107. *By Mr. Jones:* When you arrived here, what proposal did you find in the Railway Office as to extending the Railway beyond Honeysuckle Point? The plan I found proposed a coal line, and a goods and passenger line, with the Terminus at Watt-street.

108. Have you ascertained that formerly there was any other project with reference to the Terminus of the Railway? The only other project I have heard of is that of carrying out the Railway on piles to deep water at Honeysuckle Point.

109. You found that originally it was contemplated to carry out the Railway from Honeysuckle Point by means of a long jetty? Yes.

110. You have ascertained that since that there has been a project of extending the Railway to Watt-street by two lines? Yes, I believe this is the more recent one.



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111. Can you give the Committee any idea of the probable cost of the original plan? I cannot. I have seen it put down at £35,000.
112. Could it be done for that? I do not believe it could.
113. Could it be done for £70,000? I do not think it could.
114. As I understand you, you now suggest that the proposed upper line of Railway should be abandoned, for the present at least, and the Railway be extended to Watt-street by the lower line? Yes.
115. Can you favour the Committee with any idea of the cost of carrying out your proposal? I believe the cost would be about £15,000, including the passenger station.
116. With all the buildings complete? Not all the buildings, not the workshops.
117. You would have to construct all these buildings at Honeysuckle Point at the same cost? Yes.
118. So that the difference in the actual cost of carrying out your plan and the proposed jetty at Honeysuckle Point, would be about £50,000? Assuming that the jetty could be made for £70,000, the difference in cost would be about £50,000.
119. But your plan would be a decided improvement as regards cost? No doubt of it.
120. Do you believe also that it would be generally more convenient to the public? I do.
121. And that it would tend to draw traffic to the Railway, more than by carrying out the original plan of the jetty at Honeysuckle Point? I do.
122. *By Mr. Barker:* Do you think it practicable to carry out that jetty—do you think you can rely upon driving piles that distance? The only question would be as to what the bottom consists of. I have had to do with jetties that have gone further out than this, but it is only an enormous traffic that can justify it. I do not know what the strata may be, but I know that the expense of driving all these piles would be enormous, and one that I cannot see there is any traffic to justify.
123. Of course you can say nothing about its practicability, until you know what the bottom consists of? No.
124. You know there are some works, involving pile driving, going on at the Hunter now? Yes.
125. Do you know whether there are any difficulties to contend with, with respect to them? I only know from what has been told me by Mr. Hay.
126. *By Mr. Jones:* Do I understand you to say that, from the cursory examination you have made of the country between Newcastle and Maitland, it is your opinion that it was a mistake to construct this line of Railway below Morpeth at all? I think if it does not come in to Newcastle it will be a mistake.
127. Even supposing it does come in to Newcastle—? I think it was a mistake with a navigable river running parallel with the line of Railway. I do not see that there was any occasion for the Railway below Morpeth.
128. You think it should have been commenced at Morpeth as the head of the navigation? I do, decidedly.
129. Do you think it would be at all justifiable to interfere in any way with the steamers going to Morpeth? Certainly not. I do not think the Government would be at all justified in attempting to stop the steamers, but I think an arrangement might be made by which the traffic of the steamers might be transferred to the Railway at Newcastle.
130. Do you think that, in the absence of any such arrangement, the traffic should be left to fair competition between the land line and the water line? I do. It would end very shortly in one or the other giving up, but I think it is more likely the Railway would give up than the steamers, if it be worked with any view to profit.
131. Which do you find the cheapest, water carriage, or Railway carriage? Water carriage.
132. Besides the cost of working, the charges must have some reference to the actual cost of constructing the line? That ought to be the case. In working a Railway you must consider that it must not only pay for the expense of working, but for the renewal of the line, and the interest on the first outlay.
133. Whereas the river is a natural highway? Just so.
134. Therefore water carriage must be cheaper? Decidedly.
135. *By Mr. Barker:* Knowing, as I suppose you do, that the river is very shallow in some parts, do you not think that it would be more advantageous for the steam companies to discharge their sea-going boats at Newcastle than to run the risk of going over the flats? I am not prepared to say. They know their own business best, and the masters of the steamers may know the navigation so well that they have no difficulty in going over them; but I think it is just possible an arrangement may be made in the way I have spoken of.
136. You are aware that these steam boats are washing in the banks of the river very much? They must do that, undoubtedly.
137. Do you not think it will become necessary to compel them to pay a toll to defray the expense of keeping the banks in order? I cannot say.
138. *By Mr. Jones:* You think it would be better to leave it to fair competition? If I could make an arrangement with the steam companies to leave their traffic I should do so, because the competition must cause loss to somebody.
139. But you would not interfere with the steamers by means of tolls? If there have been no tolls originally, I do not think I should impose them for the purpose of enabling the Railway to compete with the steamers.
140. You are not aware, I presume, that, with the exception of a very small portion, the country this Railway passes through is very barren? I am told it is almost a swamp—a good deal of it at all events.
141. Are you not aware, on the other hand, that on the river side, between Miller's Forest and Maitland, there are some of the richest lands in the Hunter River District? I do not know.

142. *By Mr. Arnold*: You have not examined it? No; as I passed through it there seemed to be a good deal of good land.

143. *By Mr. Weekes*: There are works in progress now, I believe, for removing these flats which have been referred to? That I do not know.

144. Are you acquainted with the length of the Railway from here to Liverpool? It is about twenty-two miles.

145. That is a somewhat similar length to the Newcastle Railway? The Newcastle Railway is at present seventeen miles in length.

146. If it is continued to West Maitland it will make it about the same? About twenty miles.

147. Then, assuming that the Railroad from Maitland to Newcastle will be about the same distance as that from Liverpool to Sydney, and that they will charge the same freight for goods as the Liverpool Railway is charging—if the steamers take goods from Morpeth and bring them to Sydney for the same freight which would be charged by the Railroad for taking them to Newcastle, will it not in fact annihilate the traffic on the Railroad? No doubt of it, if they do that.

148. Are you aware that the present freight by the steamers from Morpeth to Sydney is somewhere about the same as the freight now payable on the Railway between Liverpool and Sydney? I am not. I do not know the freights by the steamers at all, excepting for passengers.

149. Supposing it probable that the freight charged by the steamers for conveying goods to Sydney from Morpeth would be the same as the Railway would charge for taking them to Newcastle, would it be justifiable, in the face of that, that the Government should any further continue the present works on the Railroad, as leading to a further waste of public money? That is a question I am not prepared to answer. If it had been a private speculation I am not certain that we should spend any more money, unless there was a prospect of getting a sufficient return for our investment, but the Government having constructed the Railway between Newcastle and Maitland, I am not prepared to say it would be improper to spend any more money to make the line available.

150. But you think there is no possibility of the Railroad competing with steamers that would bring goods to Sydney for the same freight as you would bring them to Newcastle? I cannot see the possibility.

151. *By Mr. Barker*: That is supposing the goods are taken from Morpeth or Maitland; but supposing they are carried from New England, that would alter the case? No doubt. The further you push the Railway into the country the more likely you are to get the traffic.

152. Would it not facilitate the shipping of goods to England—wool, for instance—if the line were carried into the interior and continued on to Newcastle, where ships could lay to receive them on board at once? No doubt of it. If you had a large trade at Newcastle, where vessels were coming in to take the traffic from the interior to all parts of the world, then it would be advisable to have the Railway down to Newcastle; but if you are only to use coasting vessels, and take the traffic from Morpeth, then it becomes a question whether it is advisable to run the Railway to Newcastle or not.

153. *By Mr. Arnold*: Have you any knowledge of the charges on English Railways? I have.

154. What is the charge per ton? They are at certain rates per mile, the charges varying with the class of goods.

155. What is the range? They range from three-farthings to sixpence or eightpence a ton per mile.

156. At sixpence a mile it would be ten shillings a ton from Maitland to Newcastle? I am not speaking of these rates being sixpence a ton.

157. The rates are not likely to be less than in England? I should think they would be much more.

158. I presume one great ingredient in the expense of sending goods would be the cost of transferring them from the Railway to the vessels? That expense would be the same at Newcastle as at Morpeth.

159. *By Mr. Jones*: I understood you to say decidedly that it is your opinion that having expended so much money in constructing this line, it would be advisable to expend the additional sum of £15,000 in order to give the line a chance at all? Yes.

160. *By Mr. Arnold*: Supposing it were determined to abandon the line from Maitland to Newcastle, what proportion of the whole expense would be lost? I cannot tell, just now. The only thing that could be made use of would be the permanent way.

161. The only thing that would be lost would be the earthworks? The earthworks, bridges, culverts, and land; and they form the great bulk of the expense.

162. *By Mr. Jones*: Then I understand you that to give the Railway a chance of being useful at all, it is absolutely necessary to make this extension? I think so.

163. *By Mr. Weekes*: Looking at all the circumstances of the case, and especially the rivalry of the steam-boats on the river, would you, if called upon to advise a private company, recommend the abandonment of the line between Maitland and Newcastle? If I had been consulted originally, I would not have come to Newcastle at all.

164. Would your advice now be to abandon the enterprise, conceiving the first loss to be the smallest? My advice would not be that. I do not see that there has been any loss yet. I only say that if the Railway is to stop at Honeysuckle Point, and if the steamers are to continue to run, as they undoubtedly would do in that event, it will be a question for the Commissioners to consider whether there would be traffic enough to pay for the working of the line. But it is very possible, when the line is extended a long distance into the country, that the traffic from the interior might pay sufficiently well to compensate for the deficiencies of the traffic strictly belonging to Newcastle and Maitland. It would be very little extra expense to run the engines down to Newcastle from Maitland.

J. Whitton,  
Esq.

23 Jan., 1857.

- J. Whitton,  
Esq.  
23 Jan., 1857.
165. *By Mr. Arnold*: That is to say, that the loss upon the part of the line that did not pay, would be made up by the returns from the other parts that did pay? Yes; that is the case with all Railways in the world. Many Railways run for long distances through barren tracts of country, which of themselves would yield no sufficient traffic, and yet, on the whole, these Railways pay well.
166. *By Mr. Weekes*: In which direction is the town of Newcastle extending, or likely to extend? I cannot say. It appeared to me to be a very small place, and a very poor place; I did not see any improvements going forward.
167. Can it extend in the neighbourhood of Watt-street? No, it cannot extend much there. I think the only way you can ever make anything of Newcastle is by making the Railway Terminus there. There is no trade there now, except the coal trade.
168. You mean by making the Terminus at Watt-street? Making the Terminus through the town. I do not see the slightest possible injury the town can receive from it.
169. Do you know any instance at home where a Railway, running on a level with the streets of a town, cuts off all the water frontage from that town? No, I do not know any similar instance to this; but alongside all navigable rivers there are wharfs that do cut off the access to the water by the public streets.
170. It is not desirable to run a Railroad on a level with the streets of a town? It is not advisable where it can be avoided; but in England there are a great number of Railways in that position.
171. *By Mr. Buckley*: Is it your opinion that the Railway must extend into the interior beyond Maitland, if it is to be made to pay as an investment? It is.
172. If a cheap line, a tramway for instance, were laid down to the extent of one hundred miles beyond Maitland, do you think it would be possible, taking the starting point at the extremity of that hundred miles, to deliver goods cheaper than they can be conveyed by carting, as at present? I would not contemplate making tramroads for a hundred miles beyond Maitland.
173. Whatever kind of line may be constructed, do you think goods could be taken to Newcastle cheaper than by carting them to Maitland, and sending them by steamers, as at present? I should think so, decidedly. I never knew a country yet where the people preferred carting where there was a Railway laid down, because the Railway can carry much cheaper and much quicker.
174. *By Mr. Rusden*: If the Railway is carried to the sand hills or Watt-street, do you think there will be sufficient room in the harbour for the shipping necessarily concentrated at one place? I should think so. The harbour appears quite large enough for a greater amount of shipping than it receives at present; and the greater the facilities you give vessels for shipping and unshipping their cargoes, the smaller will be the number remaining at the wharf at one time.
175. Do you think it is necessary for the Railway to carry all goods to the water's edge? I think so.
176. Is it usual in England? Where it can be done, in all cases.
177. I thought it was usual to place the Terminus of a Railway in a central position? That is in cases where they have no wharf to go to.
178. Do you think that goods could be immediately shipped from this wharf without going to the stores to be regulated? That would depend in a great measure on the arrangements made, and the quantities of goods.
179. If the Terminus is constructed at the sand hills, will it not be at the extreme end of Newcastle? Yes.
180. And to secure depth of water, and the immediate shipment of goods, you think that desirable? I do.

W. Keene,  
Esq.

William Keene, Esquire, called in and examined:—

- 23 Jan., 1857.
1. *By the Chairman*: I believe you are Inspector of Coal Fields in the Hunter River District? I am Examiner of Coal Fields.
2. I wish to ask you whether you are acquainted with the proposed extension of the Hunter River Railway from Honeysuckle Point, through the City of Newcastle, to Watt-street? Nothing more than from the general desire I hear expressed by persons at the eastern end of Newcastle, that the Railway should be extended to there. I have considered generally, but made no special study of the matter; but, believing it to be desirable that the Railway should be extended as proposed, I signed a petition to that effect.
3. Are you aware whether the desire you speak of, for the extension of the Railway from the present Terminus at Honeysuckle Point, is entertained by the people of Newcastle generally? My opinion is, that it is desired by the majority.
4. Are you acquainted with the estimated cost of the proposed extension of the line? I am not; the expense, whatever it may be, is of no consideration compared with the importance of the extension of the line.
5. Do you know anything of Bullock Island? I do; I have examined it specially.
6. Can you give any opinion as to whether it is possible to reclaim any of the land between Bullock Island and the Australian Agricultural Company's shoots? Between Bullock Island and the Agricultural Company's shoots there is a spit, or at least a bank runs out on the river side of Bullock Island, which I believe it is possible to reclaim by ballasting; but I think it very inadvisable that there should be any interruption to the water entry of the inner channel.
7. But in reference to the outer edge of Bullock Island? My opinion is that it can be reclaimed.

8. Are there any means of obtaining stone at a convenient distance from Newcastle, for the purpose of forming an embankment? There is plenty of stone to be obtained a short distance along the Line of Railway, from the place whence the stone for the Railway bridges has been chiefly extracted.
9. Would there be a sufficient supply for such a work as this? Ample.
10. Do you conceive that an embankment would be a very expensive undertaking, from the Company's land or thereabouts, to the northern point of Bullock Island, supposing it were thirty feet in width, and constructed of stone. Have you any idea of the probable expenditure on such a work? I have not; it would be expensive no doubt. My idea was, that it should be done by ballasting from vessels coming for coals.
11. *By Mr. Jones:* You contemplate the gradual reclamation of this land by ballast being thrown there? Yes; and the greater the trade of Newcastle, the greater would be the discharge of ballast.
12. It would take some considerable time to allow of the requisite quantity of ballast being deposited there? Of course.
13. *By Mr. Buckley:* Do you think it desirable that the Railway should run into Newcastle? I think it is.
14. What inconvenience would result from the Terminus remaining at Honeysuckle Point? Newcastle would not be served if the Railway did not run down to the sand hills; it would be too far away. It could run down at once to deep water by the sand hills, and I think the trade of the port would be much better served.
15. How far is Honeysuckle Point from deep water? The water is shallow at Honeysuckle Point. You must run out a pier of considerable length to communicate with deep water.
16. Was there any project for running out a pier? I am not cognizant of all the Railway plans; I have not seen them. I have heard from rumour that there was such a plan.
17. Would it be more desirable to have a pier there than to run the Railway down to Watt-street through the town? No; I think it would be more desirable to run it through the town.
18. Can you give a practical opinion why it is not desirable to construct a jetty at Honeysuckle Point—are there any objections to it? Not if it did not cut off the communication of the inner channel of Bullock Island. I think the inner channel ought to be preserved at any cost.
19. Would it not be inconvenient to cut off the water communication from the town? That would depend on what way the Railway was carried.
20. Would it be desirable to carry it on a level with the streets? Certainly not.
21. Would you elevate it? I would.
22. Is it likely to be used for carrying coals? I have no doubt of it.
23. Would any of the Coal Companies co-operate? I think they would co-operate in anything for their advantage.
24. The Railway would require to do it at a cheaper rate, to induce them to abandon their present mode of shipping? Certainly.
25. Are you acquainted with the extent of the coal fields in the vicinity of Newcastle? I can give you perhaps some idea, if you will permit me to refer to a map. (*The Witness here exhibited, and explained to the Committee, some maps and sections shewing the extent and characteristics of the coal fields around Newcastle.*) The Newcastle coal field may be equal to two hundred square miles; but you are not to suppose that the coal is equally abundant all over that area. Over those two hundred square miles you meet with coal more or less.
26. There are extensive coal fields in the vicinity of the Railway at present constructed? Yes.
27. At a considerable distance from Newcastle? Yes, within a mile of Maitland, and also within the town of Maitland itself.
28. Is there any possibility, in consequence of the existence of these large coal fields, of an extensive traffic being created on the Railway? No doubt of it.
29. Would other coal fields, besides those at present worked, be opened on the line of Railway? If there is a demand for coal, and the demand is now an increasing one.
30. There is a sufficient field to warrant the expectation of a large traffic in coal? Certainly, on the whole length of the line. The most excellent steam coal comes from that part of the line nearest Maitland.
31. It is indispensable, in your opinion, that the Railway should come down to deep water, and into the Town of Newcastle? I think so.
32. Would it tend to facilitate the shipment of coals? Yes, and all other traffic.
33. Would the Railway be rendered almost useless if the Terminus were fixed at Honeysuckle Point? I think it would fall very far short of its work, and would cause additional expense in the shipment of goods. If the Terminus were fixed at Honeysuckle Point, much of the traffic would have to be carried further.

W. Keene,  
Esq.

23 Jan., 1857.

WEDNESDAY, 28 JANUARY, 1857.

## Present:—

MR. BARKER,  
MR. BUCKLEY,  
MR. FLOOD,

MR. WEEKES.

MR. JONES,  
MR. PIDDINGTON,  
MR. F. T. RUSDEN,

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

Mr. J. Brown.

Mr. James Brown, called in and examined:—

28 Jan., 1857.

1. *By the Chairman*: I believe you are a ship owner? I am.
2. Have you had any connexion with any of the coal mines in the Hunter River district? I have had mines both at Newcastle and Maitland, but I have given them all up. I still hold ships.
3. Can you give the Committee any information with respect to any probable arrangements that the owners of coal mines in the Maitland or Newcastle districts would be likely to make with the Railway for the carriage of their coal? They would make no arrangements now, I think, the Burwood mines especially; for at one time they proposed to the Government to carry their coal at so much per ton, the Government to lay down the rail, and find the engines and so on; but the Government would come to no terms with them, and they have therefore sent to England for locomotives, and laid down a Railway of their own, at great expense. I dare say they have incurred from twenty to forty thousand pounds expense; and I do not believe that they would now enter into any arrangements with the Government, after going to so much expense themselves.
4. *By Mr. Jones*: If the Government were to make a Railway, you do not believe the Company would use it? The Company offered to use it at one time, if the Government would make it, but they would not do it.
5. And the Company having now made complete and distinct arrangements of their own, you think it unlikely that they would use the Government Railway even if it were constructed? They would not.
6. You speak of the Coal and Copper Company? Yes.
7. Are you aware whether the Australian Agricultural Company have made any arrangements for the shipment of their coal by the Government Railway? Their overseer told me they had not, and that they would not.
8. Are they about to construct any Railway of their own? They are going to do it themselves, and are not going to make any arrangements with the Government. Their rails and locomotives have come out.
9. So that they also would not be likely to avail themselves of any line the Government might construct? They would not.
10. Is there any other considerable production of coal at Newcastle besides the Agricultural Company's and the Coal and Copper Company's? There is not.
11. In fact these comprise all the pits that are now being worked at Newcastle? They do.
12. *By the Chairman*: Are you acquainted with Bullock Island? Yes; I have lived opposite to it for some years.
13. Have you ever thought of any mode of reclaiming the low land on this side of Bullock Island; could it be accomplished by throwing over ballast from a ship's side? Very easily, the same as the wharf at Newcastle.
14. Have you any notion of the expense of running a line of piles to deep water between Bullock Island and Honeysuckle Point? No, I have not. I have no idea of the expense; but I do not see that it could be a great deal.
15. Would it be easy in practice for masters of vessels to discharge their ballast, with a view to reclaim that low land? Very easy.
16. There would be no objection on their part? There would be no objection. Now they have to land their ballast on the wharf at Newcastle, and the shipowners have to pay for wheeling it back. I have had to pay as much as £3 for wheeling back the ballast of a large vessel. It would save all that, if the crew of the ship could do it themselves.
17. It would be the interest of all owners of craft to deposit their ballast on this spot? It would.
18. Can you give any information as to the length of time it would require to make a stone jetty? When I went to Newcastle three years ago, or thereabouts, coals were drawn to the wharf in carts, and there was a small bit of the wharf made, on which you could not turn a horse and cart, and down all the length some bits of it were made, and others were not; and now it is made for from one to two hundred yards, or perhaps less, for there is one bit vessels cannot get to for rocks. Now, I should think, that within three years that could be all done, as the trade of the port is increasing, and there is more ballast coming in than there was at that time.
19. Then you think a great part of that land could be reclaimed within three years? I am sure it could.
20. At no expense to the Government? At no expense.
21. *By Mr. Barker*: Is the water of sufficient depth to enable vessels to go up there and discharge their ballast? Yes.
22. What depth of water is there? I could not say exactly the depth. The "Dundonald" is lying there now, and any large vessel that goes to Newcastle is taken up there. Down at the Horse-shoe large vessels cannot swing for want of room, and they are taken up there for safety.
23. How far would a vessel have to go after discharging her ballast at Bullock Island, before she came to the coaling place? Down at the present shoots?

24. Yes? Some of them would not have so far to go as what they have now. Some vessels discharge their ballast below what is called the Queen's Wharf, and have to go up to the coal shoots afterwards. Perhaps it is half a mile, more or less. Mr. J. Brown.  
28 Jan., 1857.
25. *By Mr. Jones*: From a quarter to three-quarters of a mile? Yes.
26. *By Mr. Barker*: A vessel would be more exposed to a blast of wind, and more liable to be upset, in moving from Bullock Island to the shoots, than from the present place where they throw the ballast? In the case of a vessel that will not stand, they do not take out all the ballast until they get some coals on board. They have to lighter some of the coals before they take out all the ballast.
27. *By the Chairman*: I understand you that there is no obstacle to vessels going up to Bullock Island or returning? None in the world; in fact, with a westerly wind they can go easier than they can come up from where they throw the ballast now.
28. Are you acquainted with the anchorage immediately opposite the proposed Terminus of the Railway at Watt-street—opposite the present wharf? Yes.
29. Do you know whether there is sufficient anchorage accommodation for ships in that particular spot? I am sure there is not.
30. Not even for the present demand for shipping accommodation? Not even for the present demand. The Horse-shoe is oftentimes full, and vessels cannot get in.
31. If the Railway is constructed, have you reason to suppose that the demand for shipping accommodation will be likely to be increased? It will, and vessels will suffer a great deal by it, if they are confined to the present anchorage. The channel is so narrow that two vessels under-way cannot pass if a third is at anchor. I have here a letter from Mr. Livingstone, the Harbour Master, concerning an accident which happened the other day from this cause, and in which one of my vessels was concerned. I shall have about £24 to pay for expenses. (*The witness handed in a letter, which was read, reporting on the circumstances of a collision between the "Fay-away" and "Highland Lass," in consequence of the "Viola" being anchored in the channel.*) The "Highland Lass" was lying at the the wharf, and my vessel could not get past for want of room between the Horse-shoe and the wharf; and notwithstanding the Harbour Master's report, that each vessel should pay her own damages, as it was an accident, I have had a letter from Messrs. Spain and Young, solicitors, who are going to enter an action against me for these damages. If a great number of vessels are to be collected down there, as they would be if the Railway Terminus is made at the present wharf, shipowners will be every day liable to this kind of annoyance.
32. Are there any means that you could suggest to increase the accommodation in that neighbourhood—is the channel wider towards Nobby's? Towards Nobby's it is mostly rocks, and vessels going down there would have to undergo heavy repairs.
33. Then there is no possibility of increasing the anchorage for ships in the direction of Nobby's? None.
34. Is there sufficient depth and convenience of water frontage in the neighbourhood of Bullock Island? For some miles up there, it is all deep water.
35. Then there is every reason to expect in that locality sufficient shipping accommodation for all present and prospective requirements? Yes.
36. *By Mr. Barker*: Are you aware of the improvements contemplated by the Commissioners, to give more room to vessels at the Terminus, by the formation of a wharf? I was not aware of it.
37. *By Mr. Flood*: Do you know where the proposed Terminus is to be constructed? Near Watt-street, I believe.
38. Is it not considerably to the east of Watt-street, at what is called the stock wharf, where they ship cattle? It is not more than from fifty to a hundred yards from where they ship cattle now at the end of the wharf.
39. Is it not between the junction of Watt-street with the stream and where they ship cattle? No; it is below where they ship cattle altogether.
40. Will you explain what you mean by below it? Next Nobby's.
41. Is there not a considerable space between the point of the Horse-shoe sandbank and the wharf where they ship cattle? Not a hundred yards—not as much room as one vessel can lay in and two can pass.
42. What depth of water is there where they ship cattle? I do not know as regards that; but if you go from fifty to a hundred yards further up, you will see vessels ashore that drawn from eight to ten feet of water. I never saw them ashore where they ship cattle.
43. Is it not a fact that directly opposite where they are in the habit of shipping cattle they have upwards of twenty feet of water at all times? I believe where they do ship cattle it is deep water; but opposite that, you see vessels ashore drawing eight or ten feet.
44. Do you know the distance from the wharf in question to the North Shore? I do not.
45. It is about half a mile, is it not? About half a mile.
46. Is it not a fact that the water from that wharf, nearly the whole distance across, averages from fourteen to thirty feet? From where they ship cattle, right across it is deep water; and the end of the Horse-shoe goes down there.
47. I am speaking of the water east of the Horse-shoe altogether? I think that is deep-water down there.
48. That is the position that nearly all the large vessels that enter Newcastle anchor in after they are loaded? No; all the large vessels that ever I have seen—the "Dundonald," the "Three Bells," and other vessels—have been taken up about the factory.
49. *By the Chairman*: They do not lay down there at all? No, not large vessels.
50. Then, whatever the depth of the water may be east of the Horse-shoe, it is not used for anchorage? Large vessels do not go there. Vessels of a thousand tons or so go above the factory.
51. Do you think it is probable that the part of the harbour lying east of the sandbank would ever be used by vessels for anchorage—I mean the part alluded to by Mr. Flood? If the

- Mr. J. Brown. the Terminus is there it would. Sailors, in general, do not heed much about the expense of breaking yards and masts, and to save themselves trouble they would go there, although the owners might have to pay for it; but no man that ever had any respect for his vessel would go there: he would go to a safe place. If the Terminus was there they would run the chance.
- 28 Jan., 1857. 52. You do not think that part of the harbour a safe place? For a certain number of vessels it is.
53. How many do you think? I do not suppose above four or six vessels of the size of the "Dundonald."
54. In the neighbourhood of Bullock Island, would there be much more room and more safety? They would have a great scope of ground to go over—some miles; and if one place did not suit, they could go to another.
55. Are you acquainted with the value of land on Bullock Island or the neighbourhood? I believe it has been sold as high as £1,200 an acre. Speculators have bought at that price on Bullock Island. I believe, at Honeysuckle Point, it has been sold as high as £2,600 per acre.
56. *By Mr. Barker:* Have you bought or sold land at that price in the neighbourhood of Bullock Island? I have bought some.
57. You hold property at Bullock Island? I do. I bought some last week.
58. Have you any land at Honeysuckle Point? Part of the land that the Commissioners are going to take at Honeysuckle Point belongs to me.
59. If the Commissioners were to establish a station or Terminus at Honeysuckle Point, it would be a great advantage to you—it would improve the value of your land very much? As for that, I have very little but what I occupy myself at Honeysuckle Point.
60. At Bullock Island you have just bought on speculation, I suppose? Yes.
61. *By the Chairman:* You are acquainted with the general conformation of Bullock Island, and the position of it in the river? Yes.
62. If a line from the north-east point of Bullock Island were drawn to about the position of the Company's staiths, and an embankment were formed of ballast from the one point to the other—say thirty feet wide—have you any idea of the time necessary for the formation of such an embankment, or whether it would be an impracticable proposal? The thing would be quite practicable. I do think that now, in the present state of trade, it might be done within three years.
63. You think such an embankment could be formed, without any expense to the Government, within three years? It could be formed in even less time, and would cost them nothing.
64. If such an embankment were formed, there would be a very considerable space of waste land reclaimed from the river? There would be a great deal—some hundreds of acres.
65. Do you not think the sums derivable from the sale of that reclaimed land would much more than pay the cost of reclaiming it gradually? Far more.
66. And beyond the advantage derived by the Government from the sale of the reclaimed land, would be the great advantage to the commerce of the port by affording a more suitable site for wharfs? No question of it.
67. Have you had any information with regard to the cost of the double line of Railway proposed by the Government, including the coal line? I have not, but it must be great.
68. Do you know whether that line, if carried out, would pass over any private land between Honeysuckle Point and the present wharf? It would.
69. *By Mr. Barker:* Whose land? It would go over the Methodist ground, the Catholic ground, and, I think, over Mr. Bingle's land.
70. Do you know where the line runs? I do.
71. Are you sure it would go through any private property besides the Australian Agricultural Company's property? It would. For instance, it would sever the Methodist ground, for which, if they had to sell it now, they would get three or four thousand pounds. It would take the half of that, and the other ground it would go through too.
72. The church sites you mean? The church sites.
73. Are the churches built? No. I myself offered a thousand pounds to the Catholics for that ground three years ago.
74. Is there anything built upon it? No.
75. The land was given by the Government originally? Yes.
76. *By the Chairman:* There may be other private land through which the line passes, for what you know to the contrary? I heard that it would take away a corner of the Bank of Australasia's ground; but the pegs are not there; you see them in the other ground.
77. Do you think it would be any benefit to the commerce of Newcastle to carry the line to Watt-street? It would not only be no benefit, but it would be taking the Terminus away to the end of the town, in the same way as people in Sydney have to go to the Terminus of the Sydney Railway. Honeysuckle Point will be the centre of the town. In fact, it is almost the centre now.
78. Would there be any difficulty, in your opinion, on the part of passengers, or those persons who might wish to transmit goods, in getting conveyance to and from Honeysuckle Point, if the Terminus should remain there as it is now? If they ran it out within reach of vessels, there would be less difficulty in going out there and taking goods than in going to the wharf down at the Stockade, and the expense would be much less.
79. You assume that there is a necessity for wharf accommodation from Honeysuckle Point towards Bullock Island? Yes. Oftentimes my vessels lay two or three days before they can get a berth to discharge their ballast. The wharfage at Newcastle is very limited. There are places at the rocks that vessels cannot get to, and they have to wait till others have discharged. In a westerly wind they cannot get out or in.
80. *By Mr. Barker:* Are you a skilled engineer or surveyor? Neither the one nor the other;

other; but I have carried on work for a long time, and have had from one hundred to three hundred men under me until within the last two years. Mr. J. Brown.

81. You have not taken out the quantities of the cuttings, and so on, to ascertain what the cost of these works would be, one way or other? No; but to look at it, there is much more work to do in going down into the town than in going out to deep water at Honeysuckle Point. 28 Jan., 1857.

82. That is merely your opinion, from a cursory glance? Any one can see it.

83. *By Mr. Flood:* I think you stated that the Coal and Copper Company would not now, under any circumstances, use the Railway shoots—supposing the Government should construct shoots for the use of the Coal Companies? They would not.

84. Are you aware whether the Agricultural Company would take advantage of them? The overseer told me on Sunday morning they would not.

85. Then, in either case, whether the Terminus was at Watt-street or at Honeysuckle Point, it would not affect these companies? It would not.

86. The great objection you have to the Terminus being at Watt-street is the limited space of water there for ships? Yes. Ships are always at expense for repairs from collisions—perhaps every trip or two—and not only in repairing their own damages, but the damage they do to other vessels—besides delays after ships are ready for sea.

87. It is possible to improve the wharf and extend it very considerably to the eastward? You might improve the wharf, but where is the water? you cannot get water further on. It is quite possible to do anything with the wharf, but that is not sufficient when there is no water.

88. Wherever they may have the Terminus, still the principal portion of the trade will be carried on where it is at present, at the coal shoots? Yes; but if they take the Terminus down there, the coal vessels would have to go down that channel, and the damage that would accrue to them from collisions in that confined space would be very great.

89. What I wish to learn from you is this, that in either case the Railroad will not in any way interfere with the loading of the coal ships? No; I do not see that it will interfere with the coal ships at all.

90. Because, as you have informed the Committee, the two principal Coal Companies have no notion of using the Railway? None.

91. As far as you are concerned, your opinions are in no way connected with the question whether or not the Railroad is to be used as a convenience for the Coal Companies in carrying coal to the shoots? No.

92. Vessels entering Newcastle almost invariably carry ballast, do they not? They do.

93. They are not carriers of goods? No, they carry ballast mostly.

94. Do you not think that if the Railway Terminus is at Honeysuckle Point, the Railroad would be almost useless for some years, in consequence of the difficulty of moving goods to and from the Terminus, unless we go to the enormous expense of constructing a jetty and building a wharf-wall at once? The expense will be much less to run that wharf from Honeysuckle Point than to take the Railway right through the town, and there will be plenty of room for vessels.

95. Can you give the Committee any idea of the probable cost of the improvements you speak of at Honeysuckle Point? I could not say what the expense might be, but I do not think it would be much more than half the expense of the other plan.

96. What accommodation would the improvements you contemplate give to the shipping—how many ships would be able to lay at the jetty, and discharge or load at the same time? There is more room there than in all parts of Newcastle harbour together.

97. I think you spoke of a jetty being constructed—what accommodation would that give? It would depend on how long you make the jetty. Every ship that comes in with ballast would throw it over on one side, so that each one would increase the room.

98. *By the Chairman:* It is a very considerable distance from the northern point of Bullock Island to the main land, is it not—it would afford a very extensive amount of accommodation for ships if the embankment were once created? More than double what there is now.

99. *By Mr. Weekes:* Can you give any idea of the amount of ballast brought into Newcastle in any given period—say a week? Vessels in general bring from twenty to two hundred tons of ballast; but I do not know what number of vessels go into port every week. Some carry three hundred tons of ballast.

100. All the vessels that leave Sydney to load at Newcastle must take ballast? Yes; and all that come from Melbourne likewise.

101. *By Mr. Flood:* Do you not consider that if the Terminus is constructed at Honeysuckle Point it will have the effect of compelling passengers to go on by the steamers to Morpeth, in preference to landing on the old wharf where they land at present, and then finding their way to the Railway? Not a bit of it. It would be as easy for the steamers to land goods and passengers on the wharf that may be made at Honeysuckle Point, as on the wharf they use now.

102. That is after the improvements are made? Yes.

103. But until these improvements are made, goods and passengers will have to be landed on the old wharf near Watt-street? Yes.

104. And then they would have to be carted or conveyed in some way nearly a mile? I think Honeysuckle Point is about the centre of the town. The population in that neighbourhood has increased within the last three years so much that it is now nearly equal in amount to that of the rest of the town.

105. The population must go westward? They must go westward. There is no room the other way.

106. There are no goods that would have to be carted to or from the west end of the town or suburbs of Newcastle to the Terminus at Watt-street—there is no produce there, except coals,



Mr. J. Brown. coals, which you say would not be sent by the Railway? There is none, excepting what the population use in rations.

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107. All the goods would go to and come from the interior? Yes.
108. Goods that may arrive at Newcastle would be chiefly intended for the interior? Yes.
109. The inconvenience would be very great to have to cart them from Watt-street to Honeysuckle Point? There is no other convenience now for landing goods than at one wharf, what they call the steamer's wharf; but that would not be the case when the wharf at Honeysuckle Point is made.
110. *By Mr. Rusden:* You said that if the Railway is carried to Watt-street it will go through private property? It will.
111. It will go in the first place through the Company's land? Yes.
112. How much of that land do you suppose it will take? There are a great number of acres in it. Perhaps it will take ten acres.
113. What would you estimate the value of the land at that you suppose it would take from the Company? Land is selling there now at £2,600 per acre.
114. Then what would be the compensation they would demand—what would you demand if it belonged to you? I would demand a good deal. I suppose it might cost the Government from ten to twelve thousand pounds for their land.
115. They would at least demand that? Yes. The next land it goes through is the Methodist land; that would cost nearly two thousand.
116. And the land belonging to the Catholics? Would cost as much.
117. Then what do you suppose Mr. Bingle would demand for his? I am not sure how much it would take of his. It would take one corner off, I think.
118. Near where his house is? No, where his stores are.
119. At what do you estimate that? Say £1,000—perhaps not so much.
120. Then you think it would cost about £15,000 to go through private property to Watt-street? Yes.
121. At what would you estimate the expense of running out a wharf or jetty to deep water at Honeysuckle Point? I could not say.
122. It is stated that the cobra would destroy all the piles—what is your opinion? If they were coppered and ballast put in at the back of them, which vessels would be very glad to do, within less time than they would be eaten away you would have a good stone wharf.
123. There is a large piece of Railway constructed on piles—can you say whether the Government have taken any pains to protect those piles? Only by coppering.
124. You are aware that the Government propose to carry the present wharf half way to Nobby's, considerably beyond the place where the cattle are shipped now? I do not think they can do that, on account of the rocks, which run a great way up there.
125. I am told that a bed of rock as it were skirts the water's edge, and that they propose to build on this to get to deep water? If they do that, they will be taking away from the harbour, and the anchorage ground would be even more confined than it is now.

Mr. G. Tully.

Mr. George Tully called in and examined:—

28 Jan., 1857.

1. *By the Chairman:* You are resident at Newcastle? Yes.
2. Are you acquainted with the proposed extension of the Hunter River Railway from Honeysuckle Point to Watt-street? I never saw the plans, but I have heard it was suggested to run it down nearly opposite the stockade—between the stockade and the present wharf, where the steamers load and discharge.
3. The Terminus itself is to be fixed in the immediate neighbourhood of Watt-street, and the outbuildings will run a little beyond that towards the old stockade? Yes, I believe so.
4. What is your opinion of such a proposal, with reference to the convenience of the public of Newcastle generally? I believe that it will give the greater accommodation to the mercantile portion of the community there.
5. You particularise the mercantile portion of the community—I take it you mean with reference to loading and discharging goods? To the shipping and mercantile community.
6. Will not the proposed line intersect the streets that run from north to south in Newcastle? I believe it will intersect Newcomen-street and Bolton-street.
7. You think it will not interfere with more than two streets? The coal shoots interfere with the streets a good deal now. Scott-street does not extend much beyond Newcomen-street. It runs from the sand hills, and, I think, terminates about Newcomen-street.
8. Are there only two streets running from north to south towards the water's edge? There are more. There are Watt-street and Wolf-street, but it comes so narrow that there is not room for a street down there. The coal shoots are erected down in that direction.
9. Then, as a matter of fact, you believe this proposed Railway will only intersect two streets in Newcastle? It will intersect more if it goes beyond Watt-street.
10. I am speaking of the proposed extension of the line from Honeysuckle Point to Watt-street? (*The witness referred to the chart.*) I do not think these other streets could go to the water's edge, and I wish it to be clearly understood, that in saying that the Railway will intersect any of those streets at all, I mean only the lines representing continuations of them, as, in fact, the points of such intersections are no-where streets at present, but are unredeemed water space available for wharfs, and the streets, as aligned, extend only to highwater mark.
11. *By Mr. Jones:* You think they stop short at the Maitland Road? I think one of them goes down to the wharf called Ross' Wharf.
12. *By the Chairman:* You do not think the streets run quite to the water's edge practically? No, they do not at present, except those I have named.

13. Will not the line be likely to interfere with the access of the population of the town to the harbour? I think it could be so constructed that it would not interfere with that. Mr. G. Tully.
14. It is proposed to construct it on the road level, and to run the Railway along the whole water frontage of the city, and it is supposed to be likely to interfere with the access of the population to the harbour. Do you think it will or will not? At present the Burwood Railway crosses the Maitland Road, and I think it does not interfere with the town. 28 Jan., 1857.
15. That is at an elevation? No; and I do not see that it interferes at all with the traffic coming into Newcastle. It is not even fenced in.
16. Are you acquainted with the area of the harbour available for ships in the neighbourhood of Watt-street? Yes.
17. Is that accommodation sufficient for all purposes at the present time? A portion of it is not. I must tell you that the Horseshoe bank has extended. When I first went to Newcastle it was on a line with the Queen's Wharf, and it now extends on a line with the stock-yard.
18. Towards the mouth of the harbour? Yes. Within the last sixteen years I think it has extended that far. I recollect seeing the steamers go right across to Mr. Scott's place, but now they have to go down and head the point of the sand bank.
19. That sand bank is at present an obstruction—no ships drawing a given amount of water can go over it? They cannot go over it.
20. As that bank confines the channel to a limited space, is that space sufficient for the ships that frequent the port at present? Quite sufficient.
21. They can swing with ease, and no accidents occur? The cattle vessels load in that locality, and the steamers and other vessels going up have sufficient room to pass by without any obstruction between the point and the wharf.
22. Have you ever heard of any accidents from collision between ships? Yes.
23. What do they arise from? Sometimes from awkwardness, sometimes from the wind dying away, and sometimes from vessels having warps out and not lowering them in time to allow others to pass.
24. If the channel were wider do you think there would be the same probability of accident? I think there would. In the middle of the Horse-shoe Bend, where there is sufficient accommodation, I often see accidents occur.
25. You do not attribute these collisions to the contracted accommodation for ships? No; I think there is sufficient room for two vessels to pass—indeed, more than two; I have seen a lighter alongside a vessel loading there, and the steamers and sailing vessels passing by.
26. You would expect that when the Railway is open it will increase the traffic and commerce of the port? I should think so.
27. Do you anticipate that an increased number of ships will find the locality of Watt-street afford them sufficient room for anchorage? It will not be necessary to put more than one vessel alongside the wharf at one time.
28. I am not speaking of the wharf but of the space available for anchorage purposes? Do I understand that it is between the sandbank and the wharf that you mean?
29. Yes? They will not be allowed to anchor there; that is the passage; it must be kept clear.
30. I am speaking of the anchorage accommodation in the immediate neighbourhood of the present wharf? The anchorage accommodation is very good.
31. And sufficient for any probable increase in the number of ships? Yes, certainly. It extends from the Horse-shoe up to Bullock Island.
32. My question is limited to the anchorage accommodation in the immediate neighbourhood of Watt-street? The anchorage accommodation is good. The Horse-shoe is immediately adjoining, but of course vessels are not allowed to anchor in the channel. You can put a great number of vessels in the Horse-shoe.
33. You do not know anything of the probable expense of constructing a double line of Railway in the way proposed? I have no idea.
34. *By Mr. Flood:* Is it not a fact that the ships visiting the port lay within and east of the Horse-shoe bank? Yes.
35. Is there sufficient room, in your opinion, for all the vessels that have occasion to visit there? Yes. It is not necessary that all should go there; there is very good anchorage in the other parts of the harbour; but we generally, when loading vessels, drop them down into the Horse-shoe, and complete their loading there. Vessels discharging ballast, of course, are alongside the wharf, and then they go up to the coal shoots. There is sufficient anchorage for any number of vessels that are in the habit of loading at Newcastle, in the Horse-shoe, and to the east of it—straight across to Scott's Point, in the Horse-shoe, there is deep water right across.
36. Between these points you have named, nearly all the vessels anchor when loaded? Yes, principally.
37. *By the Chairman:* Have you any information with respect to the private property that the proposed line will pass through? The Agricultural Company's paddock is, I believe, the only private property that can be interfered with.
38. No other private property? No, not from Honeysuckle Point; all the rest is public property.
39. If a double line of Railway be carried along the edge of the town—one line at an elevation of twenty feet, and the other on the road level—will not those two lines tend to barricade one side of the town from the harbour? I should think there will be sufficient space left for ingress and egress from the wharf. Of course there will be arches left to pass under the elevated line, and I do not see how that line could interfere at all. Besides, I think there is a large space of land that could be reclaimed, and could be sold at a considerable price and made available for stores which are much required at Newcastle.

Mr. G. Tully. 40. What part of the harbour do you speak of? Between Bolton-street and Watt-street; indeed, I might extend it from Newcomen-street to Watt-street.

- 28 Jan., 1857. 41. That is between high and low water? Yes; it is now in course of being reclaimed.
42. On which side of Newcastle does the progress of population and houses tend—in what direction? Latterly, the population has increased very considerably outside of the city, on the Maitland Road, and on the Lake Macquarie Road, very considerably indeed.
43. Is that the direction in which most of the population seem to settle now? Yes. There have been more buildings erected in that quarter than in the town latterly, but they are a very different class of buildings to what will be required for city purposes. The population consists principally of the people who work at the pits, and their families, the shopkeepers who supply them, and a few public houses.
44. You know the locality of the present Terminus, so far as the Railway has been carried out to Honeysuckle Point? Yes; I have property there.
45. Is Honeysuckle Point likely to be the centre of Newcastle, judging from the increase of population in that locality? There is not much room to extend the city on the east, and therefore it must go in that direction by-and-by.
46. It is a physical impossibility to carry it out on the east? It cannot go eastward, because it is bounded by the sea, but there is a large space of land in the hands of private individuals, which will be the better portion of the city.
47. What land do you allude to? The sand hills.
48. That is raw sand? The greater portion of that sand has drifted away, and you can see the original soil.
49. What is the original soil? Clay. They have made bricks of it.
50. Honeysuckle Point, as a matter of fact, is very near the centre of the present population of Newcastle and its neighbourhood, is it not? No; the town is extending in that direction, but it is certainly not the centre.
51. The present boundary is near to the Bank of Australasia? Yes, a little to the eastward of the Australian Agricultural Company's coal shoot.
52. On which side of that boundary lies the greater portion of the population? That is a question to which I can hardly with safety give a direct answer.
53. Have you no idea whether the population on the eastern side of the Australasian Company's Bank, or on the western side, preponderates? There is a large increase of population, but more on the Lake Macquarie Road than at Honeysuckle Point.
54. But taking both together, on which side of the line drawn from the hill to the Australasian Bank is there the most population? I am inclined to think there are as many on one side as the other. I should not like to make a statement unless I was perfectly satisfied of it.
55. You cannot give any opinion? I rather think there must be more in the city than beyond it, because on the Honeysuckle Point side they have only built on one side of the road. There are a few buildings immediately on Honeysuckle Point, but the other buildings are erected on the south side of the Maitland Road.
56. Will not the necessity of crossing this proposed line involve the risk of danger to the public? Nothing more than I can perceive at present with respect to the Railway that crosses the Maitland Road.
57. No locomotives are used on that Railway at present? No, but they have sent for them.
58. When locomotives are used, the rate of speed is far greater than with horse power? Yes, but they can regulate the speed as they please; they can either go slow or quick.
59. You do not anticipate any danger whatever from the Railway line running the whole length of the town of Newcastle? No. I, myself, have seen very few Railways at home; there was only one in existence when I left Ireland; and here I have seen nothing but tramways, until the construction of the Maitland line. I was on it, and I could see that they could either lessen or quicken the speed, as the engineer chose.

TUESDAY, 3 FEBRUARY, 1857.

Present:

MR. ARNOLD,  
MR. BARKER,  
MR. BUCKLEY,

MR. GORDON,  
MR. PIDDINGTON,  
MR. F. T. RUSDEN.

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

A. Brown,  
Esq.

Alexander Brown, Esquire, called in and examined:—

1. *By the Chairman*: I believe you are a resident at Newcastle? Yes.
2. Are you acquainted with the proposed extension of the Hunter River Railway from Honeysuckle Point to the wharf? Yes, to the sand hills.
3. What is your opinion of the effect of carrying that proposed line along the harbour frontage of the river, with reference to its convenience or any probable danger to the inhabitants from their being compelled to cross the line if they wish to have access to the harbour? I think it will be the cause of great public inconvenience and of great danger to the inhabitants, if it goes down there.
4. If the line is carried out as proposed by the Commissioners of Railways, it will intersect a number of the streets of Newcastle? It will intersect seven or eight streets.
5. Are you acquainted with the harbour accommodation or anchorage in the immediate neighbourhood of the proposed Terminus? I am, and it is very limited—so limited indeed that half a dozen vessels of any size, such as the "Dundonald," which is in the harbour at present, would
- 3 Feb., 1857.

would fill up the whole of it, and would not leave sufficient space for vessels coming in and out. In fact, I have seen so much interruption from over crowding that the steamers could not go alongside the wharf, and had to land passengers and goods with boats.

A. Brown,  
Esq.

3 Feb., 1857.

6. Then, in the event of the Railway increasing the commerce of the town of Newcastle, that source of inconvenience would be much increased? If the trade centred in that spot, ships would collect there, and, of course, the obstacles I allude to would increase.

7. You are aware that the Commissioners propose a double line of Railway? Yes, I believe they do. I have not seen the plans, but I have been told that they propose a high and a low line.

8. One for coal and the other for goods and passengers? Yes.

9. Do you know whether the Australian Agricultural Company or the Newcastle Coal and Copper Company are likely to avail themselves of the services of the coal Railway if it should be constructed? I do not think they will, because it would cast an expense on them, which I do not think they would like to incur, and would be no advantage to them, except under extraordinary circumstances; for instance, when a large ship comes in they may use it, but that occurs very seldom indeed.

10. Are any other collieries open in the immediate neighbourhood of Newcastle, from which the Government might expect custom for this coal Railway? There are none but the Australian Agricultural Company's and the Coal and Copper Company's at present.

11. I presume the construction of a double line, including the coal line, would be very expensive? It must be very expensive, indeed.

12. You have no idea of the estimate of the expense? No.

13. Have you turned your attention to the possibility of any other Terminus than the Terminus at Watt-street being adopted? I have always thought the natural features of the place pointed out opposite Honeysuckle Point and Bullock Island as the proper situation for the Terminus—where the land is of no value, but will daily increase in value by the Terminus being placed there.

14. Can you give the Committee any information as to the probable expense of forming an embankment of piles from the present Terminus of the Railway at Honeysuckle Point to deep water? The distance is three-quarters of a mile, and a double line of Railway could be formed from there to deep water, at £6 a foot. I am now speaking of a viaduct well constructed on piles, so that the whole train could run right away opposite to where the "Dundonald" is lying now. At £6 a foot, it would take £23,760 to run a double line out three-quarters of a mile long.

15. How wide? Twenty-five feet wide.

16. Does that include flooring? Everything—piles to be coppered, timber to be squared, and everything complete for the engines to run on; and the contractor would make something out of it then.

17. What would be the value of reclaimed land for wharf purposes in the neighbourhood of the viaduct you speak of? It might very reasonably be expected to fetch £10,000 an acre for the wharf frontage.

18. By Mr. Arnold: Could you say what would be the value per foot frontage, with a sufficient depth behind for all purposes? I have not the slightest doubt that wharf frontage, with a depth of two hundred feet, would bring £50 a foot.

19. Not more? It might fetch more; but, in these cases, it is better to keep within the mark. As the ground would recede from the water frontage, it would, to a certain extent, decrease in value—that is to say, the water frontage would be the most valuable.

20. Could you tell us what would be the value per acre of the remainder of the land? Within the last week, for land near to that locality, I have paid at the rate of £2,600 an acre; not in so good a situation as that reclaimed land would be in. And this would be more valuable still, because it would be so much nearer the water frontage. I estimate that land, when reclaimed, at £4,000 an acre—that is to say, within half a mile of water frontage.

21. By the Chairman: After the construction of the embankment you have described, would it be an expensive work to the Government to reclaim the intervening land between Bullock Island and the embankment? It would be no expense to the Government; for ships arriving for coals would be very glad to avail themselves of the advantage of throwing their ballast out, without wheeling it back, as they do now, and so reclaiming the property. The export of coals last year amounted to upwards of one hundred and seventy thousand tons, and the ballast may be taken at one-sixth part of that—say twenty-eight thousand tons of ballast in the year—which would fill up about two acres of land.

22. Then you are of opinion that the gradual reclamation of this land would not cost the Government anything? It would not cost the Government anything.

23. And that it would be very rapidly reclaimed by the ordinary process of emptying ballast on the shoal pointed out? Yes; and every year it would be filled up with increased rapidity, as the trade of the port is increasing.

24. How much, on the average, would that reclaimed land be worth, in your opinion, per acre? About £4,000 an acre, within half a mile of the water.

25. By Mr. Arnold: Are you aware of the quantity of land there is? Between five and six hundred acres, including Bullock Island.

26. By the Chairman: Are you aware whether the proposed line from Honeysuckle Point will run through much private property? It will run through the Australian Agricultural Company's property, and take up about two acres of that. It will also pass over their staiths, which will have to be altered.

27. Have you any notion of the probable expense of that alteration? The cost of that will come to about £3,000.

28. Are the Company likely to claim compensation to that amount, in addition to the value of the land taken from them? Yes; and if their operations are stopped in consequence of the alteration, they will claim compensation for that also.

- A. Brown, Esq.  
3 Feb., 1857.
29. Are there any other owners of private property on the line? It takes a small corner off the Bank of Australasia's property, and a small piece off Mr. Croasdill's.
30. Any other? Then it goes on till it comes to the Wesleyan and Roman Catholic reserves; it takes both these reserves, and the pound into the bargain.
31. Is there any other private property through which it passes, so far as you are aware? I am not aware of any other.
32. It is possible it may trench on other private property? It may.
33. Have you any idea of the amounts likely to be claimed by these various owners, per acre? It is very likely the Australian Agricultural Company will claim at least £4,000 per acre.
34. *By Mr. Barker*: Are you a professional man—an engineer? Although I have been so engaged, I do not claim the title of engineer. It is a term often used and greatly abused in this Colony.
35. You do not profess to be a skilled engineer? No, I do not.
36. Have you made any actual measurements of the depth of water, and the distance you would have to carry the viaduct you were speaking of to deep water? I have made no actual measurements; but I have seen the "Dundonald" lying there, drawing seventeen feet six inches of water.
37. Do you know what sort of bottom it is? No, but I apprehend it is sand and shell.
38. You have not ascertained the fact? I have not ascertained the fact.
39. Do you not think that piling or stone work to the depth of twenty or thirty feet would sink very much into the soil? I have no fear of the sinking. I have been driving piles at Newcastle within the last week, and they go down very hard I assure you, after they get down about six feet.
40. Near this place? Within a quarter of a mile of it. It is all the same sort of soil.
41. But you have not examined it? I have not examined it; but looking at the banks that are dry occasionally, it has the same appearance.
42. Is there a large body of water flowing across the channel you talk of filling up? Not a very large body.
43. If it is contracted in filling up will it not cut away the bottom from the piles or stones? It may have a tendency to deepen the channel.
44. Is it not the case where they are now driving piles to contract a part of the river, that they cannot get on because the water washes every thing away? I have not seen that.
45. Not where Mr. Moriarty's works are going on? No. I have no doubt it could be done, although it might be washed away. There is a party who would be very glad to finish the job.
46. *By the Chairman*: What length of pile would be necessary for the construction of the wharf you speak of? Piles from thirty to forty-five feet long.
47. And you contemplate piles of that length in the estimate of expense that you have given? Yes. Of course as the piles approach deep water they would have to increase in length to get sufficient hold of the ground.
48. Would a very great number of long ones be required? No; the water, after it goes over the narrow portion of the sand bank deepens very quickly; so that I do not suppose these long piles will be required for more than a hundred and fifty feet. The average length will be about thirty feet.
49. *By Mr. Gordon*: I think you said you would be glad to get the contract at the price you have stated? Yes; I could get it done.
50. *By Mr. Barker*: And without examining the bottom at all? I would do it without examining the bottom. It has been pretty well examined, though I have not done so.
51. *By Mr. Arnold*: You know its character from the examination of others? I know it from the examination of others; of course I am guided by them.

Francis Bell, Esquire, C.E., called in and examined:—

- F. Bell, Esq.  
3 Feb., 1857.
1. *By the Chairman*: You are engaged on the Hunter River Railway? I am.
2. In what capacity? As Engineer.
3. What is the nature of the proposed extension of the line from Honeysuckle Point to Watt-street—is it a single line of Railway or a double line? At first it was proposed to be a double line, but now, I believe, it is changed to a single line.
4. When you say "at first," to what time do you refer? A few months ago.
5. How have you acquired the information that within the last few months the proposal has been altered? On consulting with Mr. Whitton, and the Commissioners at Newcastle, when we met there last.
6. How long since? About six weeks ago.
7. About six weeks ago the proposed double line was abandoned? Yes.
8. Who was the Engineer who proposed the double line? I do not know. When I was sent down there first, I was ordered to prepare plans for a certain thing, and that was part of the plan.
9. Then you prepared the plans for the double line? I did.
10. I presume you prepared those plans for a double line on some data? The works of the present line from Newcastle to Maitland are made for a double line.
11. I am speaking of the proposed extension to Watt-street, which was proposed to be, as I have understood, a double line, including a coal line as well as an ordinary line for goods and passengers? Yes.
12. You prepared those plans? Yes.
13. On what data did you make those plans? I only acted on instructions when I prepared the plans for the coal line. I myself scarcely thought it necessary at the time.
- 14.

14. From whom did you receive those instructions? From Captain Mann, the Chief Commissioner.
15. Was Captain Mann at this meeting six weeks since? He was.
16. Did he concur in the alteration of his own proposal? Yes, I think so.
17. From whom did the proposal come to change the character of the line? The character of the line was not changed; only the coal branch was abandoned.
18. From whom came the proposal to abandon the coal branch? Mr. Whitton, I think.
19. And the rest of the authorities, including the Chief Commissioner and yourself, coincided with that view? Yes.
20. Was any one else present? I think Mr. Hay was present.
21. The Secretary for Lands and Public Works? Yes.
22. Mr. Hay concurred? Yes.
23. All the plans you have prepared have been prepared under specific instructions? Yes.
24. In the course of their preparation, have you come to any independent judgment with respect to the advisability of extending the line? I have.
25. Does that independent judgment extend to the construction of the coal line? Not at present, but it must ultimately be carried out.
26. *By Mr. Barker:* Your opinion is that it should not be carried out at present? Not at present.
27. *By the Chairman:* But you think it ultimately must? Yes.
28. For what reason? When different coal mines are opened up, the coal must come down by that Railway. At present there is not sufficient room for shipping the coal; they will require additional staiths.
29. Then the desirability of making this coal line is altogether in prospect? Yes.
30. Depending on coal mines being opened which are not now open? Yes.
31. Are you of opinion that it is absolutely necessary for the completion of the line of Railway to carry it to the neighbourhood of the present wharf near Watt-street? I am.
32. Upon what grounds do you consider it essential that it should be carried to Watt-street? I think it is necessary to carry it to deep water, and at present at Honeysuckle Point we cannot do that.
33. Is there no other point in the harbour where deep water is obtainable, besides the neighbourhood of Watt-street? Yes, but it is very difficult to be got at.
34. Would it be possible to carry any wharf from the present Terminus at Honeysuckle Point to deep water? It would be possible, but I do not think it would be advisable. A jetty there is the only means I see at present.
35. Say from the present Terminus, in a line with the temporary jetty, to deep water, would it not be possible to carry out a wharf? It would be possible, but it would cost a very great deal of money.
36. Have you any idea of the cost of constructing a wharf, say twenty-five or thirty feet wide, on piles, from the Terminus at Honeysuckle Point to deep water? I never made any estimate of it, but I should think it would cost a great deal of money.
37. *By Mr. Arnold:* Have you any idea of the cost per foot frontage? I should say it would cost nearly £15 per running foot. It might be done for that, but I could not tell exactly without making an examination. Some of the piles would have to be of enormous length.
38. *By the Chairman:* If such a wharf were carried out to the point marked in the plan, it would reach deep water? Yes; I see the depth stated here is fourteen and eighteen feet at low water. That would be twenty-five feet at high water. The piles there would require to go, perhaps, twenty feet down, and to be about sixty feet in length.
39. They would diminish in length as they approached the land? Yes.
40. Would such a wharf interfere with the navigation of the river in any way? I should say it would change all the designs already made for the improvement of the river, because it would go completely across it.
41. It would occasion an alteration of the present plans for the improvement of the river, but would not interfere materially with the navigation? I am of opinion that it would, because it runs out into deep water, and of course any jetty you produce into a current always tends to cause the sand to silt up on either side, and to change the current. I am under the impression that it would tend to throw the current across to the other side, and make the water along the north shore the deepest.
42. Are you acquainted with the wharf accommodation in the neighbourhood of the proposed Terminus at Watt-street? Yes.
43. Is there much room there for ships to anchor? There is more room there than in any other part in the immediate neighbourhood of the town. There is only inside the Horseshoe where large vessels can lie, and just opposite. The deepest water is just opposite that place.
44. Between the wharf and the north shore? The water at the wharf is the deepest; it is about twenty-three feet.
45. How many ships could lay at anchor there? A great number; as many as I have ever seen in the harbour yet.
46. Is there any danger to ships in that neighbourhood from rocks? Not here; but between that and Nobby's there is; it is shoal water and rock bottom.
47. You believe there is sufficient room for the anchorage of all vessels likely to frequent the port, in the neighbourhood of the present wharf? I do.
48. *By Mr. Arnold:* When you spoke of the cost of piling, you said it might cost £15 a foot, I suppose you look on that as an extreme estimate? No, I do not; in fact it is very hard to give an opinion, as I did not make borings or soundings; but no doubt the piles would have to go to a great depth to be secure, and they must all be coppered.
49. *By Mr. Barker:* Is it possible to make an estimate without boring? I do not think so.

F. Bell,  
Esq.

3 Feb., 1857.

- F. Bell,  
Esq.  
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50. *By Mr. Arnold*: If any one estimated the cost at £6 a foot, would you think it a very absurd estimate? I would think so.
51. *By Mr. Barker*: Would there not be some considerable difficulty in securing piles fifty feet long? Yes. The current runs there at the rate of four miles an hour.
52. Do you think it is practicable? There is nothing impossible in engineering; but it would be very expensive. To run out that jetty there would cost at least £60,000, I am sure, to that depth of water in the channel.
53. You have gone into an estimate of the cost of the line intended to be carried to Watt-street? Yes.
54. What will be the probable cost of constructing that line from the present Terminus at Honeysuckle Point, to the proposed Terminus at Watt-street? My estimate for a single line from Honeysuckle Point to Watt-street, according to the plan now proposed, does not quite come to £10,000, without counting the cost of purchasing land, or of stations. I have plans and sections of it here. (*The witness produced the same.*)
55. If the Terminus were to remain at Honeysuckle Point, the same cost for stations and so on would be incurred there as at Watt-street? The very same.
56. So that the only additional cost would be £10,000? Yes.
57. There is a small passenger station at Honeysuckle Point? Yes; it will cost £200 or £300.
58. From the nature of the ground through which it would have to pass, it would not take long to complete the line to Watt-street? A very short time.
59. How long? Two or three months would do it. The only difficulty is crossing the Australian Agricultural Company's land; they would require to raise their way five feet.
60. *By Mr. Rusden*: You mean their bridge? Yes; it is a great deal too low at present. At home, I think, sixteen feet is the height they are compelled to give by Act of Parliament. We cannot lower our road sufficiently to go under this bridge, because we would be below high water mark, and our line would be flooded, consequently they must raise their line.
61. *By Mr. Barker*: This line you speak of, to cost £10,000, would answer all purposes for some time to come? Yes.
62. For passengers and goods? Yes.
63. Not including coal? Not including coal.
64. You have not reported this plan to the Commissioners? Yes; I sent this tracing to Mr. Whitton a week ago.
65. And with the estimate? I have not sent a detailed estimate: I have made that since.
66. Do you think you are correct in your estimate? Yes.
67. Have you taken out all the quantities? Yes. I am quite confident it can be done for that.
68. That does not include the cost of rails? No; because we have them already. It includes sleepers; but it does not include chairs, or anything that we have at present.
69. *By the Chairman*: Have you any idea whether this line will pass through any private land? It does. It passes through the Agricultural Company's land.
70. Will it occasion any interference with their staith? Not their staith; it will have to pass under their line. We might have a lift that might be raised when our trains were passing, without altering their level; but that would be very objectionable, because it would be dangerous,—because if it were not taken out of the way in time, the engine might have the funnel taken off, or it might catch the tops of the carriages.
71. Are you acquainted with any other private land it would go through? There are several other pieces of land which will have to be taken, in order to divert the road.
72. *By Mr. Rusden*: It was stated the other day that it would interfere with some ground that had been granted to the Methodists and Roman Catholics? Yes; but I think they got allotments higher up the hill in lieu of those, because they were found to be in a low and bad situation.
73. Do you pass through any of Mr. Bingle's property? He has property at Honeysuckle Point.
74. I mean here; it was said this line would go through the Company's land, then through the lands belonging to the Methodists and Roman Catholics, and then through some land belonging to Mr. Bingle? I do not think it belongs to him; he may have some interest in it. Our line does not touch it, but a small piece of it will be taken for the road.
75. There will not be much compensation demanded for that? Not much.
76. *By Mr. Barker*: The Agricultural Company have a large piece of land here, have they not? Yes; it extends four or five miles into the country, but we only go through a very small piece of it.
77. *By Mr. Rusden*: Will they demand very large compensation? I do not think so, because half of this land has no frontage at all at present, on account of the Coal and Copper Company's line running close to their fence.
78. *By Mr. Barker*: The establishment of a station at Honeysuckle Point, connected with what is now proposed, would benefit their property very much, would it not, if they wish to make sale of it in allotments? I do not think it will be much benefit to their property.
79. Do you not think the establishment of a Railroad and Terminus so near their land will benefit it? Yes, it benefits all property near the Terminus.
80. *By the Chairman*: The extension of the line would not give any particular value to their land, I apprehend? Yes, I should say it would, because if the Terminus remains at Honeysuckle Point, it is of very little use until it gets to deep water.
81. *By Mr. Barker*: The connection with deep water makes it valuable? Yes.
82. You are aware that the Act of Council compels the valuers to take into consideration the benefit conferred, by bringing the Railway on persons' properties when they estimate the damage done? That is generally taken into consideration in making an award.
83. Are you aware that the Act of Council in this Colony compels the valuers to do that? I was not aware of it.

84. *By Mr. Buckley*: Would they be likely to claim any considerable sum as severance compensation? I really do not know. I have had several conversations with them, but they have avoided the subject. I believe they are very willing to deal fairly.
85. You think there is nothing kept in the background, to induce you to suppose that after the Railway is established they will take advantage of it? I do not think so.
86. Your official duties have been confined to Newcastle and its vicinity? Not altogether. Since I have been down there, I have been in charge of the Hunter River Railway altogether.
87. Do you know anything of the line at Maitland? Yes; I prepared those plans as well.
88. Have you endeavoured to make a calculation as to what extent of Railway would enable the line to pay, and to command the traffic from the Upper Hunter? I think if it were carried up to Singleton it would pay very well.
89. You think that would insure an amount of traffic that would pay? Yes; by making the works very economical from Maitland upwards—only a single line.
90. How far is Singleton from Maitland? Only thirty miles.
91. Is that a sufficient distance to induce parties to send by that line? Yes, provided we get to deep water at Newcastle.
92. *By the Chairman*: You speak of constructing an economical line from Maitland upwards, have you come to any conclusion in reference to the nature of the line? I have seen sections of the line, and they are very fair indeed.
93. There is no change in the character of the line? Not much.
94. Have you any idea of the probable cost of the extension? I made an estimate of it; I should say about £10,000 a mile would do it, rails and every thing else.
95. *By Mr. Buckley*: Is there no other description of line that would answer the purpose equally well? I do not think there is.
96. You think it is too near for a cheaper system to be adopted, a line that would cost only four or five thousand pounds a mile? A great deal.

F. Bell,  
Esq.

3 Feb., 1857.

WEDNESDAY, 11 FEBRUARY, 1857.

Present:—

MR. FLOOD,  
MR. JONES,MR. PIDDINGTON,  
MR. F. T. RUSDEN.

WILLIAM RICHMAN PIDDINGTON, ESQUIRE, IN THE CHAIR.

Alexander Walker Scott, Esquire, M.P., examined:—

1. *By the Chairman*: I believe you are one of the Members for the Counties of Northumberland and Hunter, and have been a long time resident at Ash Island? Yes, I obtained possession of Ash Island in 1830.
2. You are aware of the proposal of the Railway Commissioners to extend the Hunter River Railway from Honeysuckle Point to that part of Newcastle called Watt-street? Yes.
3. Can you afford the Committee any opinion of your own with respect to the eligibility of that selection for a Terminus? I could do so, but I must enter into other reasons previously why I prefer the Honeysuckle Point Terminus to this.
4. Will you be good enough to give the Committee your opinion on that point? I ought to premise, first, that I am a trustee for Honeysuckle Point, and therefore it might be presumed that I have some private interest in giving my opinion in its favor. I wish to state, that the only interest I have in it is in the decision of the arbitrators, to whom the whole question has been referred; and I cannot influence them in any way whatever.
5. You have no personal interest in the matter? None whatever—none, except as a trustee. And I have no interest in any part or portion of Newcastle, or its immediate neighbourhood. I have not even an allotment in it. To proceed: The reasons I prefer Honeysuckle Point as a Terminus are, that I originally, in 1846, recommended that Bullock Island should be the proper Terminus, and that the Railway should be taken in a direct line from Bullock Island across this creek (*pointing to the map on the table*), and so carried up the river along its banks. It would then have been much straighter, and would not have involved the heavy amount of cutting at Grove's Farm, which has been the chief outlay on the Railway. Such being my opinion in 1846, and it not being carried out, partly on the same grounds I prefer Honeysuckle Point to the North-eastern Terminus proposed by the Commissioners, as being the nearest point to Bullock Island; for I have no doubt that Honeysuckle Point must ultimately be connected with Bullock Island by means of ballast stone, so that the Government would then have, for the use of the Terminus, or for wharfs, or for warehouses, or for sale, land to the amount of some six hundred and forty acres, at least; and the reclamation of that land would have more than one effect in this way, that these six hundred and forty acres, averaging, at the lowest price it can do, which is £1,500 an acre, would amount to a very large sum of money, which would pay for all the expenses of reclaiming the land, and also of making the Railroad from Newcastle to Maitland, or close to it; and, in addition to this, when the land is reclaimed, it would direct the channel of the river in such a way as to be of the utmost benefit to the harbour itself, particularly to that portion of the harbour immediately to the northward of the City of Newcastle itself.
6. Has any specific plan of accomplishing the junction between Honeysuckle Point and Bullock Island entered into your consideration? What I recommended some time ago, and what ought to have been adopted, when the Railroad was first thought of, was not to go into deep water at all, but to keep within ten, twelve, or fourteen feet of deep water, and run

A. W. Scott,  
Esq.

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A. W. Scott, Esq., piling slabs from the north-eastern end of Bullock Island along the shallow part, taking in the flat opposite the Company's staith.

11 Feb., 1867. 7. Would you not have carried on the piling to the Company's staith? Well, I am not sure about that. It might have been carried on without interfering with the Company's staith. They could have run a wharf across the reclaimed land, and met with deeper water and better accommodation in every respect for the purpose of shipping coal.

8. Have you any idea of the cost of this proposed line of piling? I should say, at the very outside, it would be £3,500; that is, for a row of piling two miles in length in the way I propose, from the Company's staith to the north-eastern end of Bullock Island—not to go into deep water. It would have no difficulties of any consequence to contend with; it would have no tides to meet with, no currents to interfere with it, and no severe weather would affect it at all.

9. How would you secure the piles on the Bullock Island side of it—would you leave them naked? Yes; entirely. The piling is only supposed to last two or three years; that is to say, to resist the effects of the cobra for that period; and, in the meantime, vessels by discharging their ballast behind it would render the piling unnecessary. If they met with encouragement, by having two or three men placed there to assist in discharging their ballast, they would do it very readily. In my opinion, they should have commenced the piling two miles to the north-east of Honeysuckle Point; and if they had done so two years and a-half ago, they would have had by this time a jetty sufficiently wide for any present purposes of the Railroad.

10. Your piling would be sunk, I think you said, where the water is shallow? Yes.

11. Would there be sufficient depth for vessels to come up to discharge their ballast? Yes; twelve or fourteen feet, with the assistance of planking.

12. What length of piles would be necessary for accomplishing the object on your method? On my method the greater proportion of the piles would be eight feet six inches in length, which could be got at £3 per hundred, delivered on the spot—say eight inches wide.

13. You consider piles of eight feet six inches in length would be sufficient; Yes; except that here and there there would be a place that would require them to be a little longer, and other places a little less. Two miles of it could be done under the price I mention. Then, when this ballast wharf would have been completed, they could have protected the interior—the inside of this piling—by other ballast just thrown roughly against it.

14. Then, as I understand you, that is the mode that you would adopt of reaching deep water? That is the mode I should have adopted; and then, ultimately, when you could afford it, you could put a better facing to this rough work, as they have done at the wharf at Newcastle itself. I repeat that the double advantage of this work would have been that the whole of that flat would have been reclaimed for the purposes of the Government, and also that the current of water would have been so directed as to have improved the harbour itself in a wonderful degree, with respect to the immediate northern portions of the City of Newcastle. In this way it would amount to a far greater consideration than any expense that could be possibly attached to it.

15. If such an undertaking were commenced from near the Company's staiths, and the various ships arriving with ballast were directed by the Harbour Master of Newcastle to discharge their ballast in the place pointed out, they would do so without any expense to the Government—would they not? Yes, they would do it; but they would not do so efficiently as by having four or five men to carry these stones, and place them properly behind the piles.

16. You think four or five men would be quite sufficient for that purpose? Quite. But I was going to say that I would not begin at the Company's place; because, if you begin there, it would have the same effect precisely as if you made that jetty without the piling; and I believe it would be very injurious to the harbour.

17. Where would you commence? At the north-east end of Bullock Island, because then the current of the water would be directed where it is most wanted; but, otherwise, the current would be directed into the Bight, and do all the injury in the world to the harbour.

18. How long do you think it would occupy, on the economical plan you have explained, to construct an embankment twenty-five feet wide, composed of ballast, for the purpose of communicating with the harbour, and affording the Railway deep water communication? That is three-quarters of a mile. I have hardly calculated that.

19. Do you think it could be done in three years' time by the operation you spoke of? Yes; in far less than three years' time.

20. Do you know whether the extension of the line from Honeysuckle Point to Watt-street will interfere with private property? I should say distinctly it would interfere with the rights and privileges of the citizens of Newcastle in an egregious manner.

21. You refer to the inconvenience it would occasion, I presume? Yes. On market days especially, and on other days, people would hardly know how to get their produce into the City. There must be a double fence and gates, and people could only be allowed to approach the water, or *vice versa*, when the carriages were not at work.

22. Independently of the extreme inconvenience that a line carried along between the water's edge and the City of Newcastle would cause to the citizens, are you aware whether it would actually interfere with private property, and to what extent? I am hardly prepared to say, if you mean whether it will lessen the value of any property.

23. I wish to know whether it would run through private property? I believe it will run through some private property, and also through the Market-place.

24. Will it not run through the Australian Agricultural Company's property? Yes, it must do that.

25. Are you aware whether there is any Government land in the immediate neighbourhood of Honeysuckle Point, a little to the westward of it, within half a mile or a mile? I do not think there is—I am not sure, because they have sold so much lately.

26. I am contemplating the possibility of the Government carrying on their line beyond Honeysuckle

Honeysuckle Point and requiring to take advantage of any vacant land they might have for buildings and so on, independently of the land you are interested in? I do not think there is any. A. W. Scott, Esq.

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27. Then they would have to make use of the land for which you are a trustee, or of Bullock Island? Yes. Bullock Island, I again repeat, is the proper Terminus, and will ultimately be the Terminus. It has the best water frontage of the whole harbour. I believe £5,000 would make the piling and the jetty complete, instead of £60,000 as the Government proposed. There is another advantage with respect to Honeysuckle Point, which is that it is, you may say, the centre of the population, which the other Terminus never can be. The last census, taken by Mr. James Harrall, who was more interested in the north-eastern end of the City than in the other, made it out that the increase of the population to the westward of the boundaries of the City is so great now that it out-numbers the inhabitants of the City proper already; and, as we all know, the boundaries of the City will ultimately be beyond the present boundaries. I believe it is an universal axiom in all trade or commerce to be in the centre of your work—so much so that the Directors of one of the largest Railway Companies, who had their Terminus near Vauxhall, have lately purchased land which has cost them two millions of money, in order to be near one of the bridges. Such is the advantage of having your work in the centre of the population.

28. From what you have stated, I infer that you consider the expenditure on the part of the Government, in reference to this line, unnecessary and extravagant? Unquestionably. The whole work is as extravagant as it can possibly be. This north-eastern Terminus can only benefit the passenger traffic and a certain amount of goods traffic; it cannot benefit the mineral traffic, for there is not space enough.

29. As I understand the proposal of the Government, they declare they are ready to extend the wharf accommodation for ships lying along the wharf in the neighbourhood of Watt-street, when their line is carried out? Of course it will operate to the exclusion of all other traffic. It will create a monopoly. They will say, you must ship by us or you cannot ship at all. I have letters in my possession now from Mr. Paterson and others requiring the Government to afford accommodation for their steamers. The Government has referred to Mr. Moriarty, and he, so far as I can understand, has instructions not to be in too great haste to reply.

30. Is it your opinion that if the line were stopped at Honeysuckle Point, the traffic that might be expected to arise from the extension to Watt-street would be very much diminished? My opinion is that whether you carry it to Watt-street, or stop at Honeysuckle Point, does not affect the traffic one iota, provided you have a good shipping place. There is nothing at present to create traffic on that line. There is no place to ship anything.

31. Seeing that, at present, the Railway has no actual waterside frontage, and taking the view you do of the matter, would you consider it desirable to sanction that Terminus as a temporary expedient, to be abandoned when a superior Terminus at Bullock Island could be created? Certainly not.

32. You think it would not be justifiable to carry the line to Watt-street and the present wharf, as a temporary expedient? No, I do not.

33. Not even if the line could be carried to Watt-street at an expenditure of £10,000 only? No; because less than £10,000 would do what I propose, in a very short time.

34. Then, as I understand you, if an equal sum were expended in carrying out your plans to that proposed to be expended in carrying out the Government proposal, the whole of Bullock Island would then be available for buildings? Yes, no question of it, if £10,000 were expended on it, and time allowed for filling up the mud bank by means of ballast.

35. As well as affording far superior water communication? Not a doubt of that. Half-a-dozen large vessels will choke up the river at Watt-street. I may mention, with respect to the value of land at Bullock Island, that the Company have lately sold half acre allotments, and they brought £1,300 each. Therefore, my estimate of £1,500 an acre, which may appear to some parties very large, is really extremely small when the frontage is made to deep water. I may likewise say, that on Bullock Island, even in its unreclaimed state, the Government sold two allotments, and the proprietors have re-sold small portions of them, and for those that were more conveniently situated they got at the rate of £1,200 an acre, and for those more indifferently situated at the rate of £800, without any improvements. And I think, with all due respect, it behoves this Committee to look not to what may be the wants of the present, but to what may be wanted in the course of fifty years, perhaps. I believe the north-eastern Terminus is an extremely good Terminus if you look forward only some eight or ten years; but if the traffic increases at the same rate as it has done for the last ten years there will be no room at all at the end of that time in the heart of the City. They will even require more land for the Terminus.

36. If you were not legally precluded from doing so by reason of your position as a Member of Parliament, would you undertake to perform the works you have suggested between Honeysuckle Point and Bullock Island for the sum you have named, £5,000? I would put up that sheet piling from the north-eastern end of the Company's staith to Bullock Island, say two miles, and likewise finish a ballast stone jetty, sufficiently large for the Railroad traffic for £5,000; and I could get dozens of people who would do the same. Say in two years time after the signing of the contract.

A. W. Scott,  
Esq.

## APPENDIX A.

11 Feb., 1857.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned, the Chairman, Deputy Chairman, and Committee of the Newcastle Chamber of Commerce, in the said Colony,—

HUMBLY SHEWETH:—

That, in order to avail to the desired extent of the capabilities of the Hunter River Railway, and to cause it fully to subserve economy and the wants of trade, it is indispensably necessary that it should be extended on to deep water at Newcastle, near the Sand Hills, at the east end of the City.

That the location of the Terminus in immediate communication with the navigable portion of the River Hunter, as is here respectfully submitted, is warranted by precedents and experience, and is in accordance with a recognized principle which obtains in all similar cases in England or America; in the latter of which even the streets, where necessary, are made viaducts for the Railway; besides which, the principle forms, integrally, one of the great objects for which Railways are formed, and is recommended by so many plain and conclusive reasons, that your Petitioners believe it to be unnecessary more particularly to refer to them.

That for these reasons your Petitioners would have deemed it unnecessary respectfully to urge their opinions on the subject on your Honorable House, had they not now learnt, with surprise, that some persons entertain the erroneous opinion (which they are said to have represented to the Executive by Petition), that the extension of the Railway along the line of wharfs at Newcastle, which is the measure that the convenience of trade most requires, would injuriously interfere with the traffic of the City.

That a Petition to His Excellency the Governor General, forwarded in May last, and signed by about one hundred of the principal inhabitants of Newcastle most competent by experience to form a correct opinion, expressed the views now entertained and declared by your Petitioners.

That the extension of the line along the wharfs, as aforesaid, will bring it in contiguity with the only convenient sites for warehouses in the City; and, for the whole length of the wharfs, would run along and towards a considerable area of land—the property of the Government—the value of which (besides that it is that best adapted for commercial purposes) will be greatly enhanced by the extension.

That the immediate formation of suitable Station-houses and buildings at the several Stations on the Hunter River line of Railway (in the erection of which some delay has taken place), is indispensably necessary to the convenience of passengers, and to the reception of goods, as well as to give scope to the development of the capabilities of the Railway itself; and that, in your Petitioner's opinion, measures should therefore be promptly taken for their erection.

That the extension of the Hunter River Railway to and beyond West Maitland into the interior, is a measure of the first importance to the development of the resources of this District, and to the Colony, and to making the Railway answer those great objects for which it was intended.

That your Honorable House, by providing in a recent money vote for the extension of the Hunter River line of Railway to deep water at Newcastle and to West Maitland, as well as for the erection of buildings for Stations, has been pleased to concede the matters and purposes, the necessity for an early prosecution of which your Petitioners now respectfully submit.

That your Petitioners therefore humbly pray your Honorable House,—

First,—that your Honorable House will be pleased to cause the extension of the Hunter River line of Railway to a terminus communicating with deep water at the east end of Newcastle, to be carried out in accordance with the vote of your Honorable House.

Secondly,—that your Honorable House will be pleased also to cause the necessary buildings to be erected for Stations, and the line to be extended to West Maitland, in accordance with the vote aforesaid, and—

Thirdly,—that your Honorable House will be pleased also to take means for the further extension of the line of Railway into the interior as aforesaid.

And your Petitioners will ever pray.

[Here follow 12 Signatures.]

## APPENDIX B.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Inhabitants of Newcastle and Suburbs, in Public Meeting assembled,—

HUMBLY SHEWETH:—

That your Petitioners, aware of the contemplated extension of the Hunter River Railway from its present Terminus at Honeysuckle Point, to a site at the eastern extremity of the City; and that the said line of Railway, according to the reported plan of the Commissioners, will, besides intersecting all the streets at right angles with the wharfs, traverse the margin of the Harbour from west to east, and consequently through a reserved portion of the wharf known as Market Wharf, and to which is annexed a reserved road to the

the Market Place, and all of which, as your Petitioners believe, have for a space of twenty-two years been set apart, proclaimed, and dedicated to public use as a Market and a Market Wharf; and the same are set forth as such upon the various Maps and Plans of the City, and as for the use and convenience of the inhabitants.

A. W. Scott,  
Esq.  
11 Feb., 1857.

Your Petitioners, therefore, and in all good faith, have hitherto looked upon this endowment as an inalienable right, of which they could not be deprived except by the Act and with the consent of Parliament; and hence they humbly beseech your Honorable House not to sanction or permit alienation or encroachment on this privilege to take place in the manner and for the purpose intended. And, further, your Petitioners pray that your Honorable House will be pleased, for the better information and protection of the inhabitants, and for the public benefit, to require that the said Commissioners first prepare and submit a correct plan by actual survey of the proposed extension line, setting forth in such plans the particulars of all lands through which the same is intended to pass, between Honeysuckle Point and the Sand Hills, with the exact quantity of such lands that will be required for the said purpose, with the names of the owners thereof, and of the sums demanded by them for the purchase of such land in fee; and also the number of parties, their names, and the amounts claimed by them as compensation for the loss of water frontage, or otherwise. And that the said plans be required to show the number and names of the streets and public thoroughfares within the City, and in what manner it is proposed to intersect, pass along, and divert them, for the purposes of this Railway. And whether any public property—as the Market, and the Market Wharf—vesting in the inhabitants, or in their Warden, or in other authorities on their behalf, will be affected, and in what manner by the same. And that copies of such plans and particulars be deposited as early as convenient with the Clerk of Petty Sessions at Newcastle, in order that the inhabitants and the public may have the benefit of their inspection.

Your Petitioners, deeply convinced of the inutility of the proposed scheme as a necessary or desirable project, submit, with deference, that before so much public money be permitted to be sunk in this extension and a Terminus at the Sand Hills, that Railway facilities should be afforded to the up-country districts, with the view to render the previous outlay on this line profitable, and the undertaking generally successful; and as the only legitimate way by which the interests of the public and of this locality can be secured.

And with this conviction, and for the general good, your Petitioners approach with due respect your Honorable House to interpose its authority on this behalf; and, in the meantime, to afford us its protection against this encroachment on the City and its privileges, and in such manner as to your Honorable House may seem just and proper.

And your Petitioners, as in duty bound, will ever pray, &c., &c., &c.

[Here follow 403 Signatures.]



1856.

NEW SOUTH WALES.

RAILWAY THROUGH APPIN TO MITTAGONG.

(CORRESPONDENCE RELATIVE TO LINE SURVEYED BY MR. SHONE)

Ordered by the Legislative Assembly to be Printed, 30 December, 1856.

RETURN to an Address from the Legislative Assembly of New South Wales, dated 9 December, 1856, requesting that His Excellency will be pleased to cause to be laid upon the Table,—

“ Copies of all Correspondence, Reports, and other Papers not already printed by order of this House, between the Government and the late Sir T. L. Mitchell, and between Sir T. L. Mitchell and Mr. William Shone, with reference to the continuation of the line of Railway surveyed by Mr. Shone, through Appin and East Bargo to Mittagong.”

SCHEDULE.

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1. Sir T. L. Mitchell to the Colonial Secretary, requesting permission to have the line of Railway measured, 27 February, 1847 .. .. .	2
2. Colonial Secretary in reply, 6 March, 1847 .. .. .	2
3. Mr. Shone to Sir T. L. Mitchell, 11 March, 1847 .. .. .	2
4. Sir T. L. Mitchell in reply, 13 March, 1847 .. .. .	3

## RAILWAY THROUGH APPIN TO MITTAGONG.

(CORRESPONDENCE RELATIVE TO LINE SURVEYED BY MR. SHONE.)

### No. 1.

SIR T. L. MITCHELL to THE COLONIAL SECRETARY.

47-113.

No. 47-81.

SIR,

*Surveyor General's Office,  
Sydney, 27 February, 1847.*

As a Railway line to Goulburn has been much under the public attention, I beg leave to suggest, for the consideration of His Excellency the Governor, that the preliminary surveys necessary on such questions have been anticipated, by what has already been done by my Department within the nineteen surveyed Counties, and that a line of route, selected after mature surveys, has been actually marked out from Sydney to Goulburn. On my return from the interior, and learning that this question was in agitation, I employed a gentleman in my Department, who is well acquainted with the details of Railway surveys, by experience in England, to run a line of levels across the two chief obstructions in the direct line, and I find the result so favourable, and this officer as well acquainted with this kind of surveying, that I am desirous to complete the survey of the whole line between Sydney and Lupton's Inn as a Railway line, that the available materials in this office may be thus embodied in such a survey, which work could be completed in three months; but that I cannot enter upon a survey so extensive without the sanction and authority of the Governor, and I therefore hasten to ask this before His Excellency leaves town.

I have, &c.,

T. L. MITCHELL.

THE HONORABLE  
THE COLONIAL SECRETARY.

&c.,      &c.,      &c.

### No. 2.

THE COLONIAL SECRETARY to THE SURVEYOR GENERAL.

No. 47-113.

SIR,

*Colonial Secretary's Office,  
Sydney, 6 March, 1847.*

In acknowledging the receipt of your letter of the 27th ultimo (No. 47-81), I am directed by His Excellency the Governor to inform you, that it is not contemplated that the Railway to Goulburn should be a Government undertaking; and that a sum of money has already been given out of the Land Revenue of the Colony to the Provisional Railway Committee in aid of the survey they are now engaged in.

His Excellency further adds, that it would therefore be very desirable that every information in the possession of your Department should be communicated to the Committee.

I have, &c.,

W. ELYARD, JUN.

THE SURVEYOR GENERAL.

### No. 3.

MR. SHONE to THE SURVEYOR GENERAL.

47-12.

SIR,

*Camp, near Appin,  
11 March, 1847.*

I do myself the honor to transmit herewith a plan, with the accompanying sections, of that portion of a proposed line of Railway lying between the Cataract and Nepean Rivers.

I have adopted the scale of four chains in length for both plan and section, as the details could not well be shewn on a much smaller one; any portion thereof can however be easily replotted to any scale you may think desirable, as all the heights and lengths taken on the ground are figured on the section.

I have been desirous to obtain as high a rate of level as possible in the crossing of the Cataract River, and have consequently made a section of a line (see section in the line C D on plan) in connexion with the originally marked out line, and joining it at the point (C). The banks are near level, and approaching the perpendicular where the proposed crossing takes place, to effect which would certainly be a matter of difficulty, owing to the great height of the cliffs; but if it can be effected, the advantages accruing therefrom would be of the greatest importance. I cannot see why a culvert (say about thirty feet wide) sufficient for the waterway, could not be constructed to resist the pressure of an embankment brought to a level on both sides; this would do away with the necessity of constructing a viaduct. If it would be found impracticable to construct any form of culvert to resist such an enormous pressure of embankment, I should say a short bridge or viaduct might be erected, and the intervening spaces filled up with embankments. If either of those measures are practicable, something of the same nature may be adopted at the Pheasant's Nest Pass.

The proper disposal of the gradients, so as to overcome existing difficulties with the  
least

## RAILWAY THROUGH APPIN TO MITTAGONG.

3

least possible amount of cutting and embanking, requires a good deal of consideration and calculation, in order to equalize the cubical contents. I should think this matter ought to stand over, until such time as a section of the whole line is made.

With regard to the fixing of a datum line, I would suggest (when the line comes to be levelled throughout) that the level of high water of spring tides in Sydney would be the most desirable one to commence operations from; as the assuming of many different datum lines in the heart of a country (which in the end have to be referred to a known datum such as I propose) only leads to confusion in the reduction of the levels.

I have done my utmost, and have worked both day and night, in my endeavour to render this work, which you did me the honor to entrust to my care, as useful and detailed as could be expected during the time I have been engaged, (viz., one month.) I have carefully checked the levels throughout, and all the heights figured on the sections correct. The cross section in the line A B, at the Pheasant's Nest, is, you will see, compiled from data afforded by the longitudinal section, and may be of some use; the heights of the upper ledges of rock I could not, however, obtain with any degree of exactness, and it was with the greatest difficulty I could level along the ledge, above the present road, pointed out to me by you as the place where the road should have been made. The only deviations to any extent which I made from the original line of marked trees, are at Allen's Creek, Horse Point Creek, and at Robinson's; and those only for short distances, for the purpose of rendering the line more direct. I have marked in dotted pencil lines on the plan where those deviations have been made. As I have not had time to keep a copy of either the plan or sections; perhaps, if you consider it necessary, a tracing or copy might be made in the office. I now await your further instructions, as to whether I am to proceed with the section of the line towards Campbelltown, or commence from Sydney with any fixed datum line it may be thought proper to assume.

SIR T. L. MITCHELL,  
Surveyor General.

I have, &c.,  
WM. SHONE,  
Assistant Surveyor.

## No. 4.

THE SURVEYOR GENERAL to MR. SHONE.

No. 47-63.

*Surveyor General's Office,  
Sydney, 13 March, 1847.*

SIR,

I have to acknowledge the receipt of your letter of the 11th instant, with the plan and sections of that portion of the proposed line of Railway between the Cataract and Nepean Rivers, and to express my satisfaction with the work. I must add that I consider the survey highly creditable to the Department, as well as to yourself individually, especially as it has been completed in a very short time, although carried over a most difficult country. As I cannot continue the survey throughout the whole line until the necessity for it becomes more urgent, I must request you will withdraw your party to the vicinity of Sydney; and on your arrival here, I shall reply to the various points adverted to in your letter.

ASSISTANT SURVEYOR SHONE.

I have, &c.,  
T. L. MITCHELL.





1857.

NEW SOUTH WALES.

LANDS TAKEN FOR RAILWAY PURPOSES.

*Ordered by the Legislative Assembly to be Printed, 17 February, 1857.*

RETURN to an *Address* from the Honorable the Legislative Assembly, dated 28 November, 1856, praying that His Excellency the Governor General would be pleased to cause to be laid upon the Table—

“ A Return of all Pieces of Land through which the Railway  
“ passes from Pyrmont and Sydney to Parramatta and Liverpool,  
“ specifying the name of each proprietor from whom the land  
“ was taken, the quantity of land so taken, the claim made by  
“ and the amount paid to each proprietor for the land so taken,  
“ and the amount assessed by the valuers in each case in  
“ reduction of compensation by considering the enhancement in  
“ value of the adjoining land belonging to the party to whom  
“ compensation has been made by the increased facilities of  
“ access to the different stations and termini of the said Rail-  
“ way; also, a Return of all Moneys expended upon the lands  
“ of any such proprietor, specifying whether expended on bridges,  
“ dams, gates, or other works, with a view to benefiting the  
“ adjoining land of such proprietor.”

## LANDS TAKEN FOR RAILWAY PURPOSES.

RETURN of all pieces of Land through which the Railway passes. Sydney and Darling Harbour to Parramatta and Liverpool.

NAMES.	QUANTITY.	CLAIM.	AMOUNT PAID.		VALUE DECLARED BY ASSESSORS.		AMOUNT ASSESSED IN REDUCTION.		REMARKS.
			£	s. d.	£	s. d.	£	s. d.	
Trustees of Benevolent } Asylum .. .. .	a. r. p. 0 3 26	£ 3,545 0 0	£ .. ..	£ .. ..	£ .. ..	£ .. ..	£ .. ..	} (£3,000 to be paid by agreement.	
John Harris' Estate ..	.. .. .	25,000 0 0	.. ..	.. ..	101,902 0 0	99,133 0 0	.. ..		
Mrs. Malpruss .. .. .	0 1 13	.. ..	300 0 0	.. ..	.. ..	.. ..	.. ..	} Occupant. Do.	
Do. .. .. .	0 0 2	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Daly .. .. .	0 0 1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} (Compensation included in valuation named above	
Harris' Estate .. .. .	.. .. .	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
John Luckings .. .. .	1 2 17	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Occupant of Harris' land.	
Do. .. .. .	0 0 3	.. ..	500 0 0	.. ..	.. ..	.. ..	.. ..		
Do. .. .. .	0 0 1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Ann Stephens .. .. .	0 0 18	.. ..	150 0 0	.. ..	.. ..	.. ..	.. ..		
Do. .. .. .	0 1 7	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Harris .. .. .	0 3 28	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Benjamin Hammore ..	0 0 12	.. ..	20 0 0	.. ..	.. ..	.. ..	.. ..	} Occupant of Harris' land.	
Mrs. O'Hare .. .. .	0 1 4	.. ..	30 0 0	.. ..	.. ..	.. ..	.. ..		
Thomas O'Halloran ..	0 1 0	80 0 0	40 0 0	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Gabriel Thompson ..	0 1 7	100 0 0	100 0 0	.. ..	.. ..	.. ..	.. ..		
John Harris .. .. .	0 0 8	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Do. .. .. .	1 2 16	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Robert Henson .. .. .	0 0 32	.. ..	60 0 0	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Gabriel Thompson ..	0 0 1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
John Harris .. .. .	0 0 3	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Patrick M'Grath .. ..	0 0 13	.. ..	300 0 0	.. ..	.. ..	.. ..	.. ..		
William Finnal .. .. .	0 0 4	.. ..	70 0 0	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
John Harris .. .. .	0 2 24	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
James M'Lurkin .. ..	0 0 18	.. ..	30 0 0	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
John Sutton .. .. .	0 0 1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
John Quin .. .. .	0 0 8	.. ..	5 0 0	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
The Crown .. .. .	5 0 6	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
John Harris .. .. .	0 0 8	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
Benjamin Ryle .. .. .	0 0 26	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Thomas Austen .. .. .	0 0 1	.. ..	50 0 0	.. ..	.. ..	.. ..	.. ..	} Do. Do.	
John Harris .. .. .	0 1 30	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Do. .. .. .	6 0 28	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Nil.	
Trustees of St. Paul's Ch.	2p. 5ft.	.. ..	200 0 0	.. ..	.. ..	.. ..	.. ..		
William M'Donald ..	.. .. .	472 14 11	370 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
John Higgins .. .. .	.. .. .	225 0 0	225 0 0	.. ..	.. ..	.. ..	.. ..		
Michael Williamson ..	.. .. .	{ £800 and } £400 }	1,200 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
Robert Spence .. .. .	.. .. .	{ £130 in 6 pd. } up shares. }	160 0 0	.. ..	.. ..	.. ..	.. ..		
Michael Rafferty .. ..	.. .. .	90 0 0	90 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
John Walker .. .. .	.. .. .	90 0 0	75 0 0	.. ..	.. ..	.. ..	.. ..		
James White .. .. .	.. .. .	650 0 0	385 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
Joseph Simpson .. .. .	.. .. .	{ 15 pd. up } shares }	75 0 0	.. ..	.. ..	.. ..	.. ..		
Henry Nanora .. .. .	.. .. .	{ £75 and fur- } ther claim }	175 0 0	.. ..	.. ..	.. ..	.. ..	} More land required.	
James Alexander .. ..	.. .. .	60 0 0	50 0 0	.. ..	.. ..	.. ..	.. ..		
A. Cornwall .. .. .	.. .. .	120 0 0	120 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
William Carnell .. ..	.. .. .	450 0 0	400 0 0	.. ..	.. ..	.. ..	.. ..		
William Forsythe .. ..	.. .. .	.. ..	60 11 6	.. ..	.. ..	.. ..	.. ..	} Nil.	
M'Kenzie and Bowman ..	0 1 15	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Ellis Buss .. .. .	.. .. .	.. ..	70 0 0	.. ..	.. ..	.. ..	.. ..	} (Tenant of M'Kenzie and Bowman.	
John Rose Holden .. ..	0 1 17	2,500 0 0	1,500 0 0	1,500 0 0	.. ..	.. ..	.. ..		
Thomas Roberts .. .. .	0 3 11	800 0 0	500 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
Mrs. Isaac Nichols .. ..	1 1 6	511 14 0	406 15 7	.. ..	.. ..	.. ..	.. ..		
Mrs. Chisholm .. .. .	4 0 0	600 <sup>3</sup> / <sub>4</sub> acre	1,527 10 0	1,527 10 0	.. ..	.. ..	.. ..	} Nil.	
Mr. Justice a'Beckett ..	0 3 6	1,500 0 0	1,000 0 0	.. ..	.. ..	.. ..	.. ..		
Felix Wilson .. .. .	1 2 4	472 10 0	394 0 0	.. ..	.. ..	.. ..	.. ..	} Damage to crops.	
Foster Anderson .. .. .	.. .. .	933 6 8	50 0 0	.. ..	.. ..	.. ..	.. ..		
John Haddock .. .. .	.. .. .	.. ..	40 0 0	.. ..	.. ..	.. ..	.. ..	} Nil.	
John Blackman .. .. .	0 3 32	150 0 0	150 0 0	.. ..	.. ..	.. ..	.. ..		
Sarah Bucknell .. .. .	.. .. .	{ 15 pd. up } shares }	.. ..	.. ..	.. ..	.. ..	.. ..	} Defective title.	
Ralph Meyer Robey .. ..	1 0 12	{ £150 & fur- } ther claim }	300 0 0	.. ..	.. ..	.. ..	.. ..		
Children of the late Jas. } Cobb .. .. .	0 0 7	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	} Nil.	
John Donohoe .. .. .	0 2 28	.. ..	150 0 0	.. ..	.. ..	.. ..	.. ..		
Robert Newman .. .. .	0 1 1	100 0 0	100 0 0	.. ..	.. ..	.. ..	.. ..		

LANDS TAKEN FOR RAILWAY PURPOSES.

RETURN &c.—Continued.

NAMES.	QUANTITY.	CLAIM.	AMOUNT PAID.		VALUE DECLARED BY ASSESSORS.		AMOUNT ASSESSED IN REDUCTION.		REMARKS.
			£	s. d.	£	s. d.	£	s. d.	
Cooper and Holt	6 3 4	600 0 0	600	0 0	324	0 0	.. ..	The Company subsequently purchased a larger portion of land than referred to in the award.	
Late Mrs. Wilford	.. ..	200 0 0	200	0 0	.. ..	.. ..	.. ..		
Mrs. Briggs	1 3 4	100 0 0	100	0 0	.. ..	.. ..	.. ..	Solicitor's fees.	
Robert Johnston	1 3 19	1,700 0 0	21	0 0	180	0 0	.. ..		
Rev. C. Priddle	1 1 7	400 0 0	100	0 0	.. ..	.. ..	.. ..		
T. J. Fisher	4 3 16	.. ..	110	0 0	.. ..	.. ..	.. ..		
James West	1 0 9	100 0 0	80	0 0	.. ..	.. ..	.. ..		
Mrs. M'Dermott	2 2 2	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Richd. Underwood & others	18 3 0	10 <sup>3</sup> / <sub>4</sub> acre	187	10 0	.. ..	.. ..	.. ..		
Peter Rawlings	0 1 5	993 10 2	.. ..	.. ..	431	0 0	437 0 0		
Thomas M'Culloch	0 2 14	.. ..	12	10 0	.. ..	.. ..	.. ..		
Henry Ferris	.. ..	200 0 0	150	0 0	.. ..	.. ..	.. ..		
George and Louisa Jones	.. ..	500 0 0	500	0 0	.. ..	.. ..	.. ..		
J. Clare	0 1 8	.. ..	30	0 0	.. ..	.. ..	.. ..		
Thos. Brain	0 2 25	50 0 0	50	0 0	.. ..	.. ..	.. ..		
David Jones	0 1 23	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Mrs. Tavener	0 2 21	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
John Jolliffe	1 0 0	.. ..	50	0 0	.. ..	.. ..	.. ..		
Richard Green	0 3 0	.. ..	70	0 0	.. ..	.. ..	.. ..		
Charles Thomas Stephens	0 2 20	.. ..	40	0 0	.. ..	.. ..	.. ..		
Mrs. Underwood	6 2 2	25 <sup>3</sup> / <sub>4</sub> acre	65	0 0	.. ..	.. ..	.. ..		
Thomas Frost	0 1 10	50 0 0	50	0 0	.. ..	.. ..	.. ..		
William Joy	.. ..	100 0 0	100	0 0	.. ..	.. ..	.. ..		
S. Marsh	.. ..	.. ..	60	0 0	.. ..	.. ..	.. ..		
Mrs. Wilks	0 0 9	200 0 0	5	0 0	.. ..	.. ..	.. ..		
John Greenwood	0 0 4	25 0 0	.. ..	.. ..	.. ..	.. ..	.. ..		
Mrs. Halloran	1 1 18	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Mr. Justice Cracroft	0 3 30	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Thomas M'Culloch	4 0 0	10 <sup>3</sup> / <sub>4</sub> acre	.. ..	.. ..	40	0 0	.. ..	By agreement.	
R. J. Want	3 3 30	{ 100 <sup>3</sup> / <sub>4</sub> acre 2 bridges.	.. ..	.. ..	.. ..	.. ..	.. ..	Tenant of R. J. Want.	
Samuel Lucas	.. ..	100 0 0	100	0 0	.. ..	.. ..	.. ..		
Loan Company	0 2 30	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
R. Fitzgerald	1 0 3	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Thomas A. Smart	3 2 6	300 0 0	.. ..	.. ..	.. ..	.. ..	.. ..		
Richard Read	1 3 0	500 0 0	143	16 0	143	16 0	.. ..		
Andrew M'Kay	1 2 14	.. ..	15	0 0	.. ..	.. ..	.. ..		
Mr. Reynolds	0 1 15	20 0 0	20	0 0	.. ..	.. ..	.. ..		
Mrs. Briggs	0 2 22	50 <sup>3</sup> / <sub>4</sub> acre	.. ..	.. ..	.. ..	.. ..	.. ..	Compensation included in amount paid above.	
Peter Plomer	0 1 13	20 0 0	.. ..	.. ..	.. ..	.. ..	.. ..		
Thomas Phillips	0 2 14	.. ..	12	10 0	.. ..	.. ..	.. ..		
Joseph Potts, for Mary Ann Bates	1 3 23	.. ..	370	0 0	370	0 0	.. ..		
Thomas Underwood	4 0 6	35 0 0	41	0 0	.. ..	.. ..	.. ..		
John Wentworth and Robt. Lowe	3 2 18	500 0 0	227	14 0	227	14 0	.. ..	Tenant of R. Wentworth. Land granted.	
Henry Bury	.. ..	.. ..	36	0 0	36	0 0	.. ..		
Sir Charles Nicholson	14 1 22	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Rev. Joseph Therry	9 3 7	100 0 0	100	0 0	.. ..	.. ..	.. ..		
G. T. Savage	8 2 23	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Alexander Smith	1 0 32	.. ..	23	0 0	.. ..	.. ..	.. ..		
William Hall	0 1 30	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Henry Elliston	2 1 16	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Mrs. Chisholm	3 1 8	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	£10 per acre agreed for. See folio No. 2.	
The late John Wright	5 2 16	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Wm. Darley	3 1 19	100 <sup>3</sup> / <sub>4</sub> acre	.. ..	.. ..	.. ..	.. ..	.. ..		
William Russell	23 3 0	.. ..	208	0 0	.. ..	.. ..	.. ..		
W. B. Campbell	.. ..	.. ..	10	0 0	.. ..	.. ..	.. ..		
Commissioners of Roads	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
J. Want	4 0 36	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
R. Bowman	6 1 24	50 <sup>3</sup> / <sub>4</sub> acre	.. ..	.. ..	.. ..	.. ..	.. ..		
Church and School Lands	6 0 1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		
Do. do.	3 3 16	100 0 0	100	0 0	.. ..	.. ..	.. ..		
Do. do.	1 1 34		.. ..	.. ..	.. ..	.. ..	.. ..		
Do. do.	4 1 38		.. ..	.. ..	.. ..	.. ..	.. ..		
Nathaniel Payten	.. ..		180 0 0	100	0 0	.. ..	.. ..	.. ..	
H. Whittaker	14 1 20	250 0 0	200	0 0	.. ..	.. ..	.. ..		
Do.	1 2 31		.. ..	.. ..	.. ..	.. ..	.. ..		
Do.	0 1 16		.. ..	.. ..	.. ..	.. ..	.. ..		
J. Byrnes	1 0 35	400 0 0	.. ..	.. ..	.. ..	.. ..	.. ..		
Do.	0 3 27		.. ..	.. ..	.. ..	.. ..	.. ..		
Do.	1 1 17		.. ..	.. ..	.. ..	.. ..	.. ..		
Do.	0 0 31		.. ..	.. ..	.. ..	.. ..	.. ..		
D. Johnson	1 0 30	20 0 0	20	0 0	.. ..	.. ..	.. ..		
T. W. Smart	2 1 33	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..		

MONEY PAID OR WORK DONE FOR THE BENEFIT OF ADJOINING LANDS.

Nil.

## LANDS TAKEN FOR RAILWAY PURPOSES.

RETURN, &amp;c.—Continued.

NAMES.	QUANTITY.	CLAIM.	AMOUNT PAID.	VALUE DECLARED BY		AMOUNT ASSESSED IN		MONIES EXPENDED OR WORK DONE FOR THE BENEFIT OF ASSESSING LANDS.	REMARKS.
				ASSESSORS.	REDUCTION.				
	a. r. p.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.			
V. Solomon .. .. .	3 0 16	10 <sup>3</sup> / <sub>4</sub> acre	.. ..	.. ..	.. ..	.. ..	Nil.	Defective Title.	
The late C. Prout .. .. .	6 0 13	.. ..	.. ..	.. ..	.. ..	.. ..			
Do. .. .. .	1 0 19	.. ..	.. ..	.. ..	.. ..	.. ..			
D. Cooper .. .. .	4 0 38	.. ..	.. ..	.. ..	.. ..	.. ..			
Do. .. .. .	1 0 19	.. ..	.. ..	.. ..	.. ..	.. ..			
Trustees of T. Moore .. .. .	5 2 30	100 0 0	68 5 0	.. ..	.. ..	.. ..			
W. Lackey .. .. .	.. ..	75 0 0	30 0 0	.. ..	.. ..	.. ..			
John Hoskings .. .. .	2 1 16	25 0 0	.. ..	.. ..	.. ..	.. ..		Tenant of the above trustees £25 agreed to.	
Commrs. Liverpool Road .. .. .	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Government .. .. .	6 2 36	.. ..	.. ..	.. ..	.. ..	.. ..			
D. Cooper .. .. .	0 1 13	250 0 0	.. ..	.. ..	.. ..	.. ..			
Government Road .. .. .	1 2 24	.. ..	.. ..	.. ..	.. ..	.. ..		House & grounds included.	
Mrs. Hill .. .. .	0 3 4	3,500 0 0	3,500 0 0	.. ..	.. ..	.. ..			
Government .. .. .	0 3 26	.. ..	.. ..	.. ..	.. ..	.. ..		Rebuilding premises.	
Liverpool Hospital .. .. .	.. ..	.. ..	1,981 0 0	.. ..	.. ..	.. ..			
Government .. .. .	5 2 15	.. ..	.. ..	.. ..	.. ..	.. ..			
Do. .. .. .	1 2 26	.. ..	.. ..	.. ..	.. ..	.. ..			
Do. .. .. .	6 3 35	.. ..	.. ..	.. ..	.. ..	.. ..			
Mrs. Ritchie .. .. .	4 1 16	.. ..	.. ..	.. ..	.. ..	.. ..			
Mrs. Underwood .. .. .	5 0 0	75 0 0	.. ..	.. ..	.. ..	.. ..			
J. N. Oxley .. .. .	.. ..	100 <sup>3</sup> / <sub>4</sub> acre.	100 0 0	.. ..	.. ..	.. ..			
John Doran .. .. .	.. ..	10 0 0	5 0 0	.. ..	.. ..	.. ..			
S. Bowler .. .. .	3 0 0	6 <sup>3</sup> / <sub>4</sub> acre.	.. ..	.. ..	.. ..	.. ..	£6 agreed to on produc- tion of Title.		

## SUPPLEMENTARY.

	£ s. d.
Fee on Grant from the Crown .. .. .	1 0 0
E. J. H. Knapp's arbitration costs in re. Mrs. Isaac Nichols' land .. .. .	15 2 0
James Martin's costs .. .. .	20 12 4
do., do., do. .. .. .	3 3 0
E. H. Knapp, arbitration in re. Thomas Roberts .. .. .	31 10 0
Messrs. Clarke, Langley, and Knapp, valuation of land of James Holt .. .. .	40 0 0
Messrs. Langley, Robertson, and Dyer, fee in Mary Ann Bates' award .. .. .	63 0 0
Messrs. Langley, Robertson, and Downey, valuation of J. Wentworth's land .. .. .	44 2 0
Do., do., do., do., Richard Read's land .. .. .	91 17 0
Messrs. Knapp, Hilly, and Bibb, valuation of J. R. Holden's land .. .. .	3 3 0
John Baptist, valuation of crops in Foster Anderson's garden .. .. .	564 12 0
Messrs. Knapp, Bibb, and Cowlshaw, valuation of the Harris Estate .. .. .	99 19 0
Do., do., do., expenses in award of Peter Rawlings .. .. .	50 0 0
John Donovan, for Quarry on Ultimo Estate .. .. .	50 0 0
Charles M'Lumley, for damages to premises in Parramatta-street .. .. .	100 0 0
Thomas M'Culloch, for services in settling Land Claims .. .. .	47 15 0
Arbitrator's Fees .. .. .	100 0 0
T. W. Dwyer .. .. .	21 0 0
Solicitor's charges in re. Johnston v. the Sydney Railway Company. See claim, fol. 3 .. .. .	20 0 0
E. T. Blackett, arbitration costs .. .. .	.. ..

CHARLES J. NEALDS,

Secretary.

1857.

NEW SOUTH WALES.

Legislative Assembly.

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 PETITION OF PETER RAWLINGS.
 

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# REPORT

FROM

THE SELECT COMMITTEE

ON THE

## PETITION OF PETER RAWLINGS;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

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*ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,  
5 February, 1857.*

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SYDNEY:

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

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 1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

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VOTES No. 9, WEDNESDAY, 4 JUNE, 1856.

4. Peter Rawlings :—Mr. Holroyd moved, pursuant to *amended* notice,—
- (1.) That a Select Committee be appointed to consider the Petition of Peter Rawlings, of Ashfield, presented to the late Legislative Council during the last Session, and to report upon the claim of the Petitioner,—with leave to sit during any adjournment of this House.
- (2.) That such Committee consist of Mr. Donaldson, Mr. Nichols, Mr. Hely, Mr. Martin, Mr. Irving, Mr. Weekes, Mr. Lee, Mr. Pye, Mr. Parker, and Mr. Holroyd. Debate ensued.
- Question—(1.) That a Select Committee be appointed to consider the Petition of Peter Rawlings, of Ashfield, presented to the late Legislative Council during the last Session, and to report upon the claim of the Petitioner,—with leave to sit during any adjournment of this House—put and passed.
- Question—(2.) That such Committee consist of \*Mr. Donaldson, \*Mr. Nichols, Mr. Hely, †Mr. Martin, Mr. Irving, Mr. Weekes, Mr. Lee, Mr. Pye, ‡Mr. Parker, and Mr. Holroyd—put and passed.
- 

VOTES No. 42, THURSDAY, 13 NOVEMBER, 1856.

10. Peter Rawlings :—Mr. Holroyd moved, pursuant to notice, That Mr. Garland, Mr. Hay, and Mr. Martin, be added to the Select Committee appointed to consider the Petition of Peter Rawlings, and to Report thereon.
- Question put and passed.
- 

VOTES No. 84, THURSDAY, 5 FEBRUARY, 1857.

2. Peter Rawlings :—Mr. Garland, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee appointed, on the 4th June last, “ to consider the Petition of Peter Rawlings of Ashfield, presented to the late Legislative Council during the last Session, and to report upon the claim of the Petitioner,—with leave to sit during any adjournment of this House.”
- Ordered to be printed.
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\* Seats declared vacant 6th June, 1856.

† Seat declared vacant 26th August, 1856.

‡ Seat declared vacant 3rd October, 1856.

1857.

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 PETITION OF PETER RAWLINGS.
 

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 REPORT.
 

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THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 4th June, "1856, to consider the Petition of Peter Rawlings, of Ashfield, presented to the late Legislative Council, during the last Session, and to report upon the claim of the Petitioner,—with leave to sit during any adjournment of this House," have agreed to the following Report:—

Your Committee have examined the witnesses whose evidence is appended hereto, and the result has been to satisfy your Committee that the whole of the Petitioners' allegations have been clearly substantiated.

It appears that the Surveyors appointed for the purpose of determining what compensation should be paid by the Railway Company to Mr. Rawlings, decided that the damage done to him by carrying the line of Railway through his property amounted on the whole to the sum of £431. They also decided that he was benefited by reason of the increased facilities of access to the different Stations and Termini of the Railway afforded him, to the extent of £437. With the first valuation made by the Surveyors (although there is evidence to shew that it is lower than it ought to have been) your Committee are disposed to concur. From the second valuation, however, they feel themselves compelled entirely to dissent.

After having most carefully considered the matter, they are clearly of opinion that Mr. Rawlings' property has not been benefited to any extent whatever, by the access afforded to him to any of the Stations or Termini of the Railway.

It appears that even if there were a Station immediately contiguous to Mr. Rawlings' property, it would be of no advantage to him to take his produce by that means to Sydney, partly on account of the expense, but more especially on account of the unsuitableness of that mode of transit for such produce; but the Station so far from being contiguous is at least a quarter of a mile away from the property in question, and is situated on the Parramatta side of it. Apart from the expense, the delay which would be involved in placing vegetables and fruit (of which it appears Mr. Rawlings' produce consists) upon the Train, and afterwards carting them away, would render it much more to his interest to avail himself of the public highway. Independently, however, of all these considerations, your Committee would not feel themselves justified in adopting the Surveyor's estimate of the benefits conferred on Mr. Rawlings, because it appears that that estimate was arrived at without evidence taken by the Surveyors, or notice given to Mr. Rawlings, a proceeding which your Committee cannot help thinking was both irregular and unjust. Had such notice been given, and evidence taken, the conclusions at which your Committee have arrived, as to the disallowance of that valuation altogether, would have been the same. If there had been any doubt about this question of advantage conferred on Mr. Rawlings, your Committee are of opinion that the public credit requires that that doubt should have been decided in favour of Mr. Rawlings, and not against him. But as your Committee entertain no doubt whatever that a clear injury to the extent of £431 has been sustained by Mr. Rawlings through the prosecution of an important public work, without any corresponding advantage to his property, they feel themselves compelled to recommend that steps should be immediately taken to pay to him that sum out of the Consolidated Revenue Fund.

JAS. GARLAND,  
Chairman.

Legislative Assembly Chamber,  
Sydney, 5 February, 1857.

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PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 20 NOVEMBER, 1856.

**Members Present:—**

Mr. Garland,		Mr. Hely,
Mr. Holroyd,		Mr. Irving,
Mr. Weckes,		Mr. Lee.

Mr. Garland was called to the Chair.

Mr. Holroyd, a member of the Committee, pointed out the reason why the Petitioner was necessitated to address this Petition to the Legislative Assembly, as set forth more especially in the fifteenth Paragraph thereof.

Mr. J. Gurner, Solicitor, was in attendance as a witness in the case.

Mr. William Barker, Solicitor, who appeared for the Railway Company, informed the Committee that on his application, by letter, to the Clerk of the Assembly to be heard on behalf of that Company in reference to this Petition, he was apprised that it would be more expedient to follow the practice as laid down in the Committees of the House of Commons, which is for the parties in any public matter of inquiry, such as the present, to be heard by their Counsel; the practice of being heard by Solicitors applying only to Committees on Private Bills.

The Chairman having thereupon directed Mr. W. Barker and Mr. Gurner to withdraw, Committee deliberated as to the advisability of permitting Mr. Barker to argue this case on behalf of the Railway Company.

Motion made (Mr. Weckes) and Question—"That this Committee do resolve Mr. Barker be now informed that he is at liberty to attend and watch the proceedings for the Railway Company, but that he cannot be heard on the matter, as they conceive that the Company have at present no *locus standi* before the Committee"—agreed to.

Whereupon Mr. William Barker was called in, and informed in the terms of the foregoing Resolution.

Mr. Peter Rawlings then examined; the Committee, however, directed that his evidence should not be put in print until such future day as may hereafter be determined upon.

[Adjourned till Thursday next, at Eleven o'clock.]

THURSDAY, 27 NOVEMBER, 1856.

**Members Present:—**

James Garland, Esquire, in the Chair.

Mr. Martin,		Mr. Pye,
		Mr. Lee.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the former Meeting of the Committee.

Committee deliberated as to the course they should now pursue, and decided upon further examining the Petitioner

Whereupon Mr. Peter Rawlings further examined.

Mr. J. Gurner, Solicitor, examined.

Committee deliberated as to whether it was necessary to take further evidence, and were opinion that it was advisable to take the evidence of those witnesses who the Petitioner stated were in a position to prove certain allegations set forth in his Petition, and resolved that such witnesses be summoned accordingly.

Committee directed the evidence of the Petitioner, taken at the former Meeting, and at that time ordered to be withheld from the Printer until such future period as they might hereafter decide upon, to be now printed.

[Adjourned till Thursday next, at Eleven o'clock.]

THURSDAY, 4 DECEMBER, 1856.

**Members Present:—**

James Garland, Esquire, in the Chair.

Mr. Holroyd.		Mr. Lee.
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Mr. J. Brown, Mr. G. Jones, Mr. B. Morris, Mr. A. Hearne, Mr. P. Spencer, and Mr. T. Maculloch, severally examined.

Mr. Peter Rawlings further examined.

Committee deliberated as to the expediency of forthwith naming a day for their next Meeting, and decided that no further Meeting should be called until Members of the Committee had had before them printed copies of the evidence.

Committee then adjourned.

THURSDAY,

THURSDAY, 29 JANUARY, 1857.

Members Present :—

Mr. Garland, | Mr. Hely.

A Quorum of the Committee not being present, [Adjourned till Thursday next, at Twelve o'clock.]

THURSDAY, 5 FEBRUARY, 1857.

Members Present :—

James Garland, Esquire, in the Chair.

Mr. Martin, | Mr. Lee, Mr. Holroyd, | Mr. Hely.

The Chairman stated, that understanding that copies of the Printed Evidence had now been circulated amongst the Members of the Committee, he had called the present Meeting of the Committee for the purpose of proposing a Draft Report for their consideration.

Motion made and Question—"That the proposed Draft Report be now read"—agreed to.

Draft Report read accordingly, and with certain verbal amendments, agreed to.

Whereupon Motion made and Question—"That this be the Report of the Committee"—agreed to.

Chairman requested to Report to the House, together with the Minutes of Evidence.

LIST OF WITNESSES.

Thursday, 20 November, 1856.

Mr. Peter Rawlings, Petitioner .. .. . Page 1

Thursday, 27 November, 1856.

Mr. Peter Rawlings, (2nd examination) .. .. . 2 John Gurner, Esquire, Solicitor, .. .. . 3

Thursday, 4 December, 1856.

John Brown, Esquire, Licensed Surveyor .. .. . 4 George Jones .. .. . 5 Mr. Benjamin Morris .. .. . 6 John Brown, Esquire, (2nd examination) .. .. . 7 Mr. Abraham Hearne .. .. . 7 Mr. Paul Spencer .. .. . 7 Mr. Peter Rawlings, (3rd examination) .. .. . 8 Mr. T. Macculloch .. .. . 9

APPENDIX.

(To Evidence given by J. Gurner, Esquire, Solicitor, on 27th November, 1856.

Copy of the valuation of the three Surveyors, appointed to determine the amount of compensation to be paid by the Sydney Railway Company, to Peter Rawlings .. .. . 3



1856.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

## PETITION OF PETER RAWLINGS.

THURSDAY, 20 NOVEMBER, 1856.

Present:—

MR. GARLAND,		MR. HOLROYD,
MR. HELY,		MR. LEE,
	MR. WEEKES,	

JAMES GARLAND, ESQUIRE, IN THE CHAIR.

Mr. Peter Rawlings, called in and examined:—

1. *By Mr. Holroyd*: Where do you live? At Ashfield.
2. What are you? A gardener.
3. Have you any land on the Liverpool Road? Yes.
4. How much land have you there? Sixteen half-acre allotments.
5. That is eight acres? Yes.
6. When did you buy it? About twelve years ago.
7. In 1842, I believe, it was? Yes.
8. What did you pay for it? £62 an allotment.
9. That is at the rate of £124 an acre? Yes. They were sixty-two feet frontage, and they sold at the rate of £1 a foot. The back allotments did not cost that. I did not buy them all at one time.
10. The front allotments cost you £62 the half acre? Yes.
11. Were there any improvements at the time you bought the land? There were no improvements; it was all open; nothing, only trees and stumps; there was no cultivation at all.
12. Was it fenced in? No.
13. Were there any buildings upon it? No,—none.
14. Did you clear it? Yes.
15. What did you do with the land after you cleared it? I cultivated part of it, but I found I could do no good with it without trenching, and so I turned to and trenched three acres of it.
16. Did you trench that part where the Railway runs through, the portion nearer the Parramatta Road, where the pond is? Yes.
17. Did you trench all that the Railway took away from you? Nearly all of it.
18. Did you put anything on it? Yes; grape vines, fruit trees of all kinds, strawberries, and vegetables.
19. Any buildings? A hut, pig-stye, and temporary stable, all done with slabs.
20. Where the Railway runs now? No, not where the Railway runs, but just alongside of it.
21. Are those buildings still in existence? They knocked them nearly all down, but I put them up again.
22. Are you using them now? Part of them.
23. Which is the nearest Railway station to your land? Ashfield.
24. How far is it to the Ashfield station? About a quarter of a mile.
25. Has the Railway increased your property in value? No, all the other way.

Mr. P.  
Rawlings.

20 Nov., 1856.

## MINUTES OF EVIDENCE TAKEN BEFORE THE

THURSDAY, 27 NOVEMBER, 1856.

Present:—

MR. GARLAND,  
MR. LEE,MR. MARTIN,  
MR. PYE.

JAMES GARLAND, ESQUIRE, IN THE CHAIR.

Mr. Peter Rawlings, called in and further examined:—

Mr. P.  
Rawlings.  
27 Nov., 1856.

1. *By Mr. Martin*: I believe you have already stated that you have no increased facilities of access to the Railway by reason of anything the Railway Company have done? No, quite the other way; I am worse off than I was before.
2. How far is the level of the Railway below the surface where it runs through your land? I think somewhere about twenty-two or twenty-three feet.
3. How far beyond your land does it continue at that depth? It varies greatly in the depth.
4. Are we to understand that the Railway cutting has made a trench through your land twenty three feet deep? Yes.
5. Has that trench had the effect of draining the moisture from your land to any extent? Yes, it has taken away the water from me; I always had a fine pond of water until then; before I ever bought the land at all there was a natural spring of water there, and the inhabitants round about used to go and get the water for use.
6. Is there any advantage which you enjoy by reason of the carrying of the line of Railway through your land, which all the neighbouring proprietors do not enjoy equally with yourself? No.
7. It is no benefit to you that the Railway should go through your land? Not in any way.
8. You would have been just as much benefited if it had gone through your neighbour's land? Yes.
9. With this difference, that you would not have lost any of your land in that case? Yes.
10. Can you state whether any witnesses were examined before the surveyors appointed to assess the damage done to your property, with reference to any advantage you are said to gain by this Railway? No.
11. How do you get to the station from your place? You can go by the side of the cutting to the station, and save a good deal of ground; but if you go down the Liverpool Road, and turn in the right direction to the station, it makes it about half the distance further.
12. How far is it to go by the regular public road to the station? I should say about a quarter of a mile.
13. The short cut you spoke of is through private property? It is on the side of the line itself.
14. On the Railway property? Yes.
15. You state the whole of the damage done to your property by the Railway at about £900—is that correct? Yes, at the very least.
16. What is the value of frontage to the high road out there now? I have known it go at about £3 10s. and £4 a foot. I know Mr. Smith gave £350 odd for about sixty odd feet of frontage.
17. Have you ever received any offer from any person to purchase any part of your property? Yes, from three or four gentlemen. One gentleman offered me £3 a foot, a Mr. Gorman, for one hundred feet. One gentleman offered me £2 10s. a foot, and to take the whole of it, after I came to live on my own property.
18. Was the waterhole you have spoken of, one naturally formed? Yes. When I bought the land it was my object to make a garden, on account of always having the water on the hill.
19. For what purposes did you use the water? For every purpose—for drinking, and for the use of the garden particularly; as it stood on the rise of the hill, we used to let the water run into trenches to water the ground whenever we wanted; I had a large piggery in front, and it was used for the pigs, and for the horses, and everything.
20. Is there any place on your ground so well adapted for the formation of a waterhole as that particular spot? No.
21. Were you ever asked by the surveyors, when they were assessing the value of this property, anything about the increased facilities of access which you were presumed to have obtained by reason of the Railway? No, not in any way.
22. Were you ever asked by them to bring forward any evidence on that point—the advantage you derived from the Railway? No, not by the surveyors.
23. Did they tell you before they came to a conclusion, that they intended to take that circumstance into consideration? No.
24. When did you first know they were going to inquire into the benefit you derived from the Railway, with a view to making a deduction from the amount of your compensation? I never knew that till afterwards, not till they gave me a bill for £99 19s., and I did not know what it was for.
25. What I want to ascertain from you is, when you first knew the Company were going to make a deduction from you for the benefit which the Railway conferred upon you? I never knew it till afterwards, when Mr. Gurner told me.
26. Have you read this Petition of yours carefully through, or has it been read to you? I read it myself.
27. Are all the allegations contained in it true? I think so, every word of it.
28. You believe every statement contained in it to be correct? Yes, I do.

John

John Gurner, Esquire, called in and examined:—

J. Gurner,  
Esq.

1. *By Mr. Martin*: Were you Mr. Rawlings' Attorney in the proceedings that are spoken of in his Petition? Yes; I obtained the order for reference to the Surveyors.
2. Did you attend the meetings which these surveyors held for the purpose of inquiring into the matter? Yes.
3. On Rawlings' behalf? Yes.
4. Do you recollect whether any evidence was tendered on either side, or invited by the Surveyors, with reference to the increased facilities of access afforded to Rawlings to the different stations and termini of the railway? None that I recollect; the Surveyors, I understood from themselves, previous to any meeting being held, had been out to, and viewed the property by themselves, and without any notice to either party, or at all events as far as Rawlings was concerned—I got none, and I understood from him that he got none.
5. Was your attention drawn, as the professional adviser of Rawlings, to the circumstance of these facilities I have spoken of? I pointed out to the Surveyors, at one of the meetings, that they were only entitled, under the Act, to take into consideration, by way of reduction from the compensation, the facilities that Rawlings had to the station and terminus of the railway; but then, I also stated, at that time, that there was no railway, and consequently there could be no facilities.
6. Do you produce a copy of the award? I do; this is a copy of the valuation. [*The witness handed in the same. Vide Appendix A.*]
7. Then we are to understand that no evidence was taken on either side with reference to these supposed facilities of access? None that I am aware of.
8. Was the award afterwards taken into the Supreme Court? Yes; a rule *nisi* was applied for, and obtained, to endeavour to set aside the valuation.
9. In that application I believe Rawlings failed? The rule was discharged without costs, and he had to pay his own costs. He made two applications in the case—first of all, as no power is given under the Railway Act for the Surveyors to take evidence on oath, Mr. Barker, who appeared for the Company, contended that as that power was not given, the Surveyors could not examine any witnesses; I, on the other hand, contended that although there was no power given by the statute to examine witnesses on oath, they might be examined as to the facts without oath, and such credence given to their testimony as they thought it deserved. The arbitration adjourned the meeting to give time to consider the question, and they were of opinion that they could not examine any witnesses. In consequence of their decision I made an application to the Supreme Court for a mandamus to compel them to examine witnesses, and I obtained a rule *nisi* calling on the arbitrators to show cause why such writ should not issue to compel them to examine witnesses.
10. What did the Court say with reference to that matter? The matter came on for argument, and the Judges dismissed the rule without costs—Mr. Justice Dickinson stating at the time that the rule could not be made absolute because the Act did not require the arbitrators to examine witnesses, but he intimated that if they made an award without doing so they might be liable to some criminal prosecution—that is as I understood the judgment of the Court. After the decision was obtained witnesses were examined on behalf of Rawlings, but none on the part of the Company—I forget whether any documentary evidence was handed in or not. The valuation was made afterwards, and bore date on the 26th August, 1854, and then the Company refused to take it up. I was applied to, to take it up, but as the arbitrators charged £99 19s. 6d for the award, and as under the Act the Company had to bear all expenses, I refused to take it up; the Company's Solicitor, about the 25th October, gave me notice that they had taken it up.
11. How long was the inquiry going on before the arbitrators? The Surveyors were appointed about the 15th May, 1854, and the award is dated the 26th August, in the same year; the application for a mandamus caused a considerable delay. There were two motions to the Court—one for a mandamus and the other to set aside the award. Both rules were discharged without costs, whereby each party had to pay their own.
12. The Court held that they were unable to assist you in consequence of the way in which the Act was framed? Yes, for want of jurisdiction. In moving for the rule *nisi* I instructed Counsel that there was no authority given by the Act to make the valuation a rule of Court, and requested that the Court might be informed of that fact in order that it might refuse the rule, in the first instance, if it considered it had no jurisdiction; but, notwithstanding that, they granted us the rule. When it came on for argument Mr. Manning appeared for the Company and objected to the jurisdiction of the Court, and the Court decided that they had no jurisdiction, and discharged the rule without costs. The costs that Rawlings has been put to in taking these proceedings will, I expect, be somewhere about £100, which of course he will have to pay. I have the various documents referred to here, if you wish to see them. There is one document which Rawlings states he signed for the Railway Company, and which is not forthcoming; I do not know what it is—I understand it does not relate to the land actually taken, but to the waterhole. He informs me it was drawn up by Mr. Cowper. The document cannot now be found, but the facts relating to it are stated in the Petition, I believe.
13. Do you know Rawlings' land yourself? I have not seen it since the railway was made.

#### APPENDIX A.

Be it remembered that we, Edward James Howes Knapp, John Bibb, and Thomas Cowlshaw, the three Surveyors nominated by the instrument in writing hereunto annexed, under the hands of James Sheen Dowling and Thomas Wingate, Esquires, two of Her Majesty's Justices of the Peace, acting in and for the District of Sydney, in the Colony of New South Wales, do determine, by our own valuation, the amount of compensation to be paid by the Sydney Railway Company to Peter Rawlings, the owner or person interested in,

or

J. Gurner,  
Esq.  
27 Nov., 1856.

or claiming compensation for, or in respect of, or in relation to the taking and using of the piece or parcel of land mentioned in the Schedule thereunder written: And which is also delineated on the map or plan, also hereunto annexed, and colored red; having heard the several parties who appeared before us, and examined the said land, and having duly weighed and considered the matters referred to us, after mature deliberation and calculation, do determine that the sum of three hundred and thirty-four pounds seventeen shillings is the entire value of the said land so taken, used, and injuriously affected by the said Railway Company, and the sum of ninety-six pounds three shillings is the value of a house and other buildings, garden and fruit trees, vegetables, loss of time, moving building and materials, and loss of water-hole, which have been taken and destroyed by the Sydney Railway Company, making a total sum of four hundred and thirty-one pounds as the entire value of the land and other damages. We further find and determine that the adjoining land belonging to the same owner, and being the residue of the estate, of which the land above mentioned is parcel, will be increased by the contemplated railway and station to the amount of four hundred and thirty-seven pounds, and we further find and determine that no amount of compensation shall be paid by the Sydney Railway Company to the said Peter Rawlings. And we, the said Edward James Howes Knapp, John Bibb, and Thomas Cowlshaw, do declare that the above valuation is, to the best of our knowledge, skill and judgment, correct and just. In Witness whereof we have hereunto set our hands, this twenty-sixth day of August, in the year of our Lord one thousand eight hundred and fifty-four.

EDWARD J. H. KNAPP.  
JNO. BIBB.  
THOS. COWLISHAW.

THURSDAY, 4 DECEMBER, 1856.

Present:—

MR. GARLAND,		MR. LEE,
MR. HOLROYD,		MR. NICHOLS.

JAMES GARLAND, ESQUIRE, IN THE CHAIR.

John Brown, Esquire, called in and examined:—

J. Brown,  
Esq.  
4 Dec., 1856.

1. *By the Chairman:* You are a Licensed Surveyor? Yes.
2. Under the Government? No; I am surveying a block of the city at present.
3. Under the Commissioners? Yes.
4. How long have you been a Surveyor? Forty years and more.
5. How long have you been in this Colony? I have been in the Colony thirty years. I was in the Surveyor General's Office for upwards of three years, under Mr. Oxley, before Sir Thomas Mitchell's time.
6. Do you know the value of property in the neighbourhood of Sydney? Yes, I suppose I do as well as most.
7. *By Mr. Holroyd:* Do you know the land taken from Peter Rawlings, by the Sydney Railway Company? I do; I was called upon by Rawlings to survey it and put a valuation upon it.
8. Do you know how much was taken from him already? I made a sketch of it, but I have not it here; I do not know exactly how much it is without looking at the plan.
9. Can you say what is the value of that land? At the present time it is not worth so much as it was then.
10. What was the value of it when it was taken by the Railway Company in 1853? I think we put £700 upon it; I do not exactly recollect.
11. Have you any memorandum you can refer to, to tell us the value? I think it was seven hundred and odd pounds we put upon it.
12. *By the Chairman:* Could you not state what was the value of it per acre, about that time? I do not remember the exact amount; two hundred odd pounds.
13. Was that per acre, or for the portion taken off—what did you value at £700? There was first the land, and then whatever was on it; there was a house upon it and pigstyes and several other things—improvements made by Rawlings.
14. Was there any water? There was splendid water; I believe it was always full; I could not vouch for its being a living spring; but the well is very valuable, as all the other water in the neighbourhood is brackish.
15. *By Mr. Lee:* Was it a well or waterhole? It was a large hole containing many tons of water, and was nearly full when I was there; I was there before the cut was made. The water they use now in the railway cut is from it, so I think it is evident there was some kind of spring.
16. *By the Chairman:* I think there was a drain that came in from the opposite side? Yes, I believe there was. I suppose it might be partly supplied by water from the road and partly from the spring, as far as I could judge.
17. What you estimated was the portion of ground that was to be taken from Rawlings, together with the improvements on it? Yes.
18. *By Mr. Holroyd:* You estimated that at a little over £700? Yes, a little over. I should say it is not worth so much now by a great deal. I must acknowledge the valuation of it was to the full extent. I would not state anything more than I think to be correct.
19. Was the land pointed out to you that the Railway Company were about to take? Yes; it had been marked out before.

20. Do the Committee understand that your valuation extended only to the portion of land that was marked out—that Rawlings pointed out to you? Yes, that was all. Rawlings was with me at the time.
21. You do not remember at this time the exact quantity of land? No; I supplied a map of it, and attended a meeting at Mr. Knapp's Office.
22. In your opinion is the land that the Railway Company have taken from Mr. Rawlings increased in value by its proximity to the Railway Stations? I do not think it can be much. It is a good distance from the station-house; of course there is some benefit from it, making it a little more lively with respect to appearance, but I do not think there is any real improvement.
23. In your opinion has its proximity to the railway increased the value of the remaining land? We did not consider so at the time the valuation was taken.
24. When it was marked out was the railway in existence? Yes; it was getting nearly up to Rawlings' property, which was marked out but not cut through.
25. On the Petersham side or the other side? On the Petersham side.
26. Was the station in existence? There was no station-house.
27. In your opinion, property at that time was not much enhanced in value by railway communication there? It was not considered to be so.
28. *By the Chairman:* Were you examined by the Surveyors to whom this matter was referred for arbitration? Yes.
29. Were you asked by them whether the property was enhanced in value by reason of the increased facilities of access to the station? It was never called in question at that time.
30. You were not asked that? No.
31. *By Mr. Holroyd:* Do you think the property is enhanced in value by the facilities afforded of going to the railway station, in reference to the transmission of produce from that garden to Sydney—in your opinion does that enjoy any increased value from the facility of sending produce by the railway, as compared with the facility of sending by the road? The only advantage from proximity to the station-house is, that you can get to Sydney more speedily yourself; but with regard to taking produce, no train would stop to take in produce. It is no great distance from Rawlings' to the station-house.
32. Suppose he had to send a load of cabbages to Sydney, would it be easier for him to send them by the road to Sydney, or to take them to Ashfield, and then send them by the rail? I do not think it would be worth while to put himself out of the way to take them to the station. Besides, if he comes in to Sydney, he can bring out what he wants himself.
33. Then, in point of fact, he enjoys greater facility of bringing produce to market by the road than by the rail? Why, it is nearer as to the rail; but it is not likely he would put himself out of the way to unload his cabbages and put them on the rail, because he generally brings back a load of other articles he wants when he goes home, I think.
34. Would he not have to go from his place towards Parramatta to get his produce upon the rail? Yes.
35. Then that would be so much loss of time in going on to the Sydney Road? Yes; and he would have to load and unload into the train, and then have to reload in Sydney, so that I do not think it would ever be any benefit to him in taking produce into Sydney. It would, certainly, if he were going as a passenger and taking small quantities of things, but for the produce of a garden, I do not think it is any advantage.

J. Brown,  
Esq.  
4 Dec., 1856.

George Jones, called in and examined:—

1. *By Mr. Holroyd:* Where do you live? At the Gas Works.
2. Have you any property at Ashfield? Yes, exactly opposite Rawlings'.
3. On the opposite side of the Liverpool Road? Yes, next but one to Mr. Maculloch's.
4. How much land have you there? Half an acre.
5. Does the railway go through it? It commences, I believe, from what I have seen of it, just at the corner of Mr. Maculloch's property, goes through the next allotment across mine, where they took down a weather-board cottage of two rooms, and the corner of a four roomed brick house. I believe it is all down together now.
6. Did the railway take any portion of your land? They took the whole of it.
7. Did you make any claim for compensation? Yes, and they offered me a sum I was not satisfied with. They were backward and forward for eighteen months, and during this time I had the house done up.
8. What did you offer it for? I wanted £400 for it.
9. When was this? In 1852.
10. You offered it for £400 and they would not give that? Not at that time. They dilly-dallied about it, and I had the place done up. I was letting the house at 3s. 6d. a-week; I could not live in it myself. After they found it was just finished they came about it again, and said they must have it. I said if they paid for it they might have it. They said then if I did not come to terms, they would go through it and settle it by arbitration. I said I should not agree to that. Mr. Cowper then came about it, and Mr. Randle went up several times and told the tenants he would pull it about their ears if they did not come out.
11. What did they eventually pay you for it? £500.
12. For the half acre of ground, a four roomed brick cottage, and weather-board cottage of two rooms? Yes.
13. Was any of the ground in cultivation? It had been in cultivation, and there were twenty-four or twenty-five trees in it, but at the time I let it they turned horses into it.
14. At the time the Railway Company took it, was it in cultivation? No; the fruit trees grew just as they were left. There was nothing set in the garden for the last two or three years.

G. Jones.  
4 Dec., 1856.



- G. Jones.  
4 Dec., 1856.
15. That piece of land is nearer the railway station than Rawlings'? It is exactly opposite Rawling's.
  16. It is between Rawlings' land and the Ashfield station? Yes; they ran right through it.
  17. What did this brick house let for at the time they took it? Twelve shillings a-week for twelve months.
  18. What did the slab cottage let for? Two shillings a week, at that time.
  19. They took the whole half acre? They took the whole half acre. At first it was said they were to go more into the middle of the garden. I said they might take part of the land and throw me a bridge over. They offered me £200, but I would not take it; but afterwards I thought I had better take £500 for the whole than be bothered about it.
  20. *By the Chairman*: How much of that £500 did you consider as value for the land? I never took any notice. I did not value it dear, for the house was put on it before I took it—the brick one—the other I built myself.
  21. *By Mr. Holroyd*: You know the piece of land they have taken from Rawlings'? I know the land, but I have not been on the road since it has been cut away. I know the corner; I know he used to have a little cottage there.
  22. Do you recollect where he had the water-hole? When I lived there it was in the middle of the garden; but he bought a piece since, I think.
  23. Do you think the remaining portion of Rawlings' land is enhanced in value from the facility of going to Ashfield station? No, I do not see that there can be much benefit from it.

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Mr. Benjamin Morris called in and examined:—

- Mr. B. Morris.  
4 Dec., 1856.
1. *By Mr. Holroyd*: What are you? A landholder.
  2. Where do you live? I live now in Sydney, in George-street.
  3. Do you know Rawlings' property at Ashfield? I do.
  4. Do you know the portion of land taken by the Railway Company? I have seen it.
  5. Did you at any time make him any offer for this land? Yes.
  6. In what year? About two years and a half ago, just before the rise took place in land, as it was beginning to rise.
  7. Was the Railway made through his land at that time? No; I had no notice of the Railway coming through there.
  8. Did you make him any offer for his land? Yes, for part of the frontage, somewhere towards the Parramatta Road, somewhere where the Railway is. I offered to buy the whole of his frontage to the Liverpool Road, leaving him sufficient room to go on his ground.
  9. What did you offer for it? £2 10s. a foot.
  10. How many feet were there? I cannot tell exactly; I think about £500 or £600 the amount came to.
  11. You offered £2 10s. per foot for the frontage by a hundred feet in depth? It was an angular piece, which made the depth greater at one corner than the other. I was buying it on speculation. I bought a cottage soon after for £240, and sold it about a fortnight after for £500. That was further on towards Liverpool way.
  12. In the town of Ashfield? Yes.
  13. In your opinion is the land that Rawlings now has, that was not taken away by the Railway Company, enhanced in value from the facility of access to the Ashfield station? I should think not, if I had that piece of land he has got.
  14. Do you think it could have been enhanced in value as far back as 1853, when there was no station there? I never looked to the Railway at all, and as to the garden, supposing I had not bought the whole, I should not have considered the station any advantage for the produce of the ground.
  15. I believe it is as easy for Rawlings to bring his produce direct to Sydney, as to take them to the station, and send them by Railway? It is better for him to fill his cart in the garden and not unload it till he gets to Sydney. It spoils the look of a load of vegetables if they are once disturbed.
  16. When going towards the station from his place, he would have to go away from Sydney and then come back again? Yes.
  17. You know the Ashfield station? I do. I do not think it could be any benefit to his adjoining land. If the station had been on the Petersham side of Rawlings' land, it would have been some advantage, because it would bring people from the upper end of the road past his ground, and he might have had an inn; but very few people pass his house now; there is no neighbourhood whatever; if they come to the station they do not pass Rawlings' house at all. At the time I bid for the land, I had no idea of the rail; it was merely for a speculation. I am satisfied, I should have made at least a couple of hundred pounds by it if I had bought it, for I should have sold it immediately.
  18. You would have broken it up? Yes; I would have subdivided it into allotments.
  19. Did Rawlings, when you bid £2 10s. a foot, tell you what he wanted for it? He said he would not sell it on account of being a man of family, because it would be something for them after he was dead; he said it was all he had, and he would like to leave it them; or else no doubt he would have taken my offer, because the money was there for him.
  20. *By Mr. Lee*: Did you notice the waterhole on the land? I looked at it, but I was not in there; the land I wanted did not go so far. I knew he had water, and kept a quantity of pigs. When he would not sell to me I went away.

SELECT COMMITTEE ON THE PETITION OF PETER RAWLINGS.

John Brown, Esquire, again called in, and further examined:—

J. Brown, Esq. 4 Dec., 1856

- 1. *By the Chairman*: Will you have the goodness to look at this plan. (*Handing a plan to the Witness.*) Is that the plan made by you of Mr. Rawlings' property? It is.
- 2. *By Mr. Holroyd*: Just look at the corner, and refresh your memory as to the valuation put by you upon that land? I find it says here "Measurement and valuation of part of the property required for the Railway—

Liverpool Road ... ..	224 ft 6 in.		
Bank-street ... ..	124 ft		
		£	s. d.
348 ft. 6 in., at £2 per foot ... ..		697	0 0
Dwelling House ... ..		52	10 0
20½ rods fencing, at 15s. ... ..		15	7 6
4 pig-styes at £2 ... ..		8	0 0
		£772	17 6

- 3. That was your valuation? Yes, in 1853.
- 4. Was that a fair valuation at that time, in your opinion? It was considered so.
- 5. Was it considered by you a fair valuation of the property at that time? Yes, I think so.

Mr. Abraham Hearne, called in and examined:—

Mr. A. Hearne. 4 Dec., 1856.

- 1. *By Mr. Holroyd*: You are a landholder? Yes.
- 2. Do you know the land that the Railway Company took away from Rawlings? Yes.
- 3. Do you recollect a small house being upon it, and some piggeries? Yes.
- 4. And there was a pond there? Yes.
- 5. Can you say what, in your opinion, was the value of that land three years ago, when the Railway Company took it? Land was getting very valuable about that time.
- 6. What, in your opinion, was about the value of that land at that time? I could not tell you. I was there about the trees.
- 7. What was the value of the trees and vines? I think it was somewhere about £15 or £16; it is so long ago I forget.
- 8. In what state was the land when you went there—was it in cultivation? Yes, it was under cultivation. I think I valued five hundred cabbage plants just turning into heart, that were all pulled up, and were not fit for market.
- 9. Do you think the Railway Station at Ashfield has improved Rawlings' property? I think the Railway has done a good deal of harm to the garden by draining the substance away.
- 10. Which would be the most convenient way for him to send his produce to market, by Railway, or to bring it along the Parramatta Road in his cart? If he loaded his cart in the garden, the best way would be to bring it to Sydney by the road; it would be cheaper and more convenient, because the vegetables would not be knocked about in loading and then unloading on coming by the Railroad into Sydney; it would not knock his things all to pieces.

Mr. Paul Spencer, called in and examined:—

Mr. P. Spencer. 4 Dec., 1856.

- 1. *By Mr. Holroyd*: What are you? I am a gardener by profession.
- 2. Where do you live now? At Enfield.
- 3. Do you know the land that the Railway Company took from Rawlings? Yes, I have known it these ten years past, and I have lived out in that neighbourhood.
- 4. What was the state of the land when they took it, was it in cultivation? Yes, it was.
- 5. What was on it? Some fruit trees and vines. It was regularly fenced in by the road side, and there was a waterhole in one corner of it.
- 6. What sort of a waterhole was it? A tolerably fair size.
- 7. Was it ever dry in your time? I never saw it dry.
- 8. And you have known it many years? Yes, I have been passing and re-passing that place above ten years.
- 9. What was the damage that was done to the garden, as to the fruit trees and vegetables, when the Railway people took possession of it? At the time the Railway Company took it there were some ornamental trees in front, at each side of the gate going in. These had to be taken up, and could not be re-planted at that time, for it was a time that would not suit to transplant them, and so were other bearing fruit trees and vines.
- 10. In your opinion, what damage was done to the standing trees and crop? I think Mr. Hearne and I valued it at something like £16 altogether—between £15 and £16.
- 11. You are a practical gardener—which do you think would be the more convenient way to take produce from that garden to market, by the Railway, or along the Parramatta Road with a cart? The cart, and that is what I use every day I come in to market. If I was beside the Railway Station I would still take my cart. I find it the most convenient way of taking produce that short distance.
- 12. Why? Because I can take it to any part of Sydney I like without the expense of hiring a cart from the Railway Station in Sydney.
- 13. Would vegetables and fruit suffer from being moved from a cart on to a Railway truck, and from the Railway truck to another cart in Sydney, to take them to market for sale? No, they would not suffer, but it would be the most convenient way, for that short distance, for a man to take them in his cart.
- 14. *By Mr. Lee*: Is it possible to make another waterhole on Rawlings' land, and if so, at what expense? It is not, from the way the Railway has cut off the communication. There was a sort of an under-drain that went under the road, that helped to supply this waterhole that was taken away.

Mr. P.  
Spencer.

4 Dec., 1856.

15. What do you, as a gardener, think that waterhole was worth on that piece of land? That I could not exactly estimate. If I were placed in the same circumstances as Rawlings, I would not have taken £100 to have it done away.
16. For you would want the water to water the trees and plants, and for the use of the house? Yes.
17. *By Mr. Holroyd*: Do you know if Rawlings grew strawberries? Yes.
18. Did he use the water for that purpose? Yes, for all those kinds of plants that he wanted to bring round.
19. To bring quickly into market? Yes.
20. *By the Chairman*: Is Rawlings' property passed through by the Railway by means of a deep cutting? Yes, it takes off an angle of it.
21. *By Mr. Holroyd*: Is there a cutting down? Yes, I suppose between fourteen and fifteen feet deep.
22. *By the Chairman*: In your opinion, does that injure the garden in any respect by draining it? It certainly takes away the moisture from under the fruit trees adjoining.
23. *By Mr. Holroyd*: On the ground he now has? Yes.
24. In your opinion, is the land of Rawlings that he has left, that the Railway did not take away, increased in value by its proximity to the Ashfield station? I do not consider that it is. As I stated before, if I were situated as Rawlings is, I would prefer taking my produce to market on my cart, even if it were two or three miles further on, unless it were further in the interior of the country.
25. Unless at Parramatta, Liverpool, or Bathurst? Yes; then it might be convenient to send by the rail, but not for this short distance.
26. *By Mr. Lee*: Do you consider that Rawlings' land is enhanced in value for the purpose of selling it out in small allotments to build cottages upon? I do not know; I am not altogether acquainted with that; I cannot say that it is. I always understood that the old man wished to keep it.
27. Could they build cottages near the Railway where the deep cut is? Yes, of course they could, if he wished to sell it.

Mr. P.  
Rawlings

4 Dec., 1856.

Mr. Peter Rawlings called in and further examined:—

1. *By Mr. Lee*: You say the railway has taken your waterhole away? Yes.
2. Is it possible to make another waterhole on your land—and if possible, at what expense? I do not think it could be made so good at any expense, unless there might be by chance a spring there.
3. What use did you make of that water? I used it for my plants and trees; I used it to flood the ground whenever it wanted water; to water the horses and pigs; for the use of the house, and for every use.
4. *By Mr. Holroyd*: Where do you get water from now? From a gully that runs down in the middle of the garden, more than a hundred yards away; but then that water is not good, it is brackish.
5. Was the water good in the waterhole the railway took away? It was.
6. Was it a spring? Yes; I never knew it dry in the driest season. It was there before ever I bought the land. It was a large waterhole supplied by means of a trough from the drainage of the road.
7. You had some litigation with the Company to recover the value of this land, before Mr. Cowlshaw and others? Yes.
8. Had you to mortgage this property in consequence? Yes; I had to borrow money on it.
9. To what amount have you mortgaged it? I borrowed £250.
10. Why did you do so? Because I wanted it for different purposes; I had expenses to pay people for carrying water to the farm, and for other purposes.
11. Did the Company fence in the side of your land to Bank-street? No.
12. They made a new Bank-street to go to old Bank-street? Yes.
13. Did they fence in the land on that side? Yes.
14. Who had to do that? They took away my fence and put a three rail fence with no palings. I had a pair of gates fronting the Liverpool Road.
15. What have they done with the gates? I have got the gates lying there.
16. What way have you to get to the back of your property? No way except by coming through new Bank-street.
17. What difference does that make in the distance, as you used to go when you went along old Bank-street? It makes 300 yards difference.
18. Do you use the other portion as a market garden? As a nursery and orchard.
19. Do you bring your produce into Sydney? Three times a week.
20. Do you use the railway for that purpose? No.
21. How do you bring it in? With a horse and cart.
22. Is that the most convenient way? Yes; we should have to load and unload twice by the railway, and then pay for a horse and cart to take it away in Sydney.
23. Is the railway any benefit to you as to the orchard and garden? No; the cutting drains all the water away, and destroys the trees; and if I want to build, it completely ruins my ground from being cut down.
24. The railway cutting has drained your ground, and so injured your trees? Yes.
25. *By Mr. Nichols*: This railway has been no benefit to you whatever? No, but an injury in every way. I am put to twenty-five shillings a week expense in paying men to carry water for the pigs alone.
26. The railway has cut off your supply of water? Entirely.
27. *By Mr. Holroyd*: I think you bought the land in 1841 or 1842? Yes; but I knew the land for many years before, and I knew the water. It was always a swampy bad part of the road until the Government altered it.

Mr.

## SELECT COMMITTEE ON THE PETITION OF PETER RAWLINGS.

Mr. Thomas Maculloch, called in and examined:—

Mr. T.  
Maculloch.

4 Dec., 1856.

1. *By the Chairman*: You reside at Ashfield, I believe? I do.
2. For two years past you have been extensively engaged in the management of landed property? I have.
3. Have you ever seen that plan of Rawlings' property before? (*handing the plan to the witness*) I do not know that I have.
4. Do you know Rawlings' property? I do, very well.
5. You live near it? Immediately opposite.
6. Did you know his dwelling house? Yes.
7. Did you know his waterhole? I knew there was a waterhole there at one time, but that of course is not there now, owing to the passage of the Railway.
8. Can you say what in your opinion was the value of this land that the Railway Company took away, together with the buildings and the waterhole, in 1853? I am not well acquainted with the value of the buildings that were on it, but I think that in 1853 from £300 to £400 would have been a fair price for the land with this waterhole on it alone.
9. Without considering the house? I do not know the value of the house, piggeries, or any of the offices that were on it, but the waterhole was very valuable in my estimation; any one knowing anything of gardening will know the value of irrigation. My own impression is, that this piece of land with the waterhole on it, was worth from £300 to £400 at a fair valuation.
10. Do you include in that the fencing and cultivation, or just the naked land? The naked land, not the cultivation, dwelling house, or fencing.
11. You know the residue of his land, what he has left now,—do you consider that it is at all enhanced in value by reason of increased facility of access to the station at Ashfield or at Sydney? I do not, in any way.
12. Rawlings is a market gardener—in taking his produce to market, what in your opinion is his best way of doing so, in a cart direct by the road, or taking it to the Railway station at Ashfield, placing it there on a truck, and afterwards taking it in a cart from the terminus in Sydney? I have no doubt much the more direct way would be to take it from the garden by the road in the producer's own cart; that is the plan I would adopt, even if the Railway were so close as it is, perhaps within twenty chains.
13. Do you know whether there are any facilities at the present time for putting a cart on a truck, and bringing it down? I know there are not.
14. Can you put a horse in the train? No.
15. The Ashfield station is the nearest station to Rawlings' land? Yes, it is within about twenty chains.
16. In your opinion, it would be much more convenient for a market gardener to take his produce by the road than by the rail? Yes.
17. And cheaper? Decidedly.
18. The Railway runs through a cutting through Rawlings' land? Yes, about fifteen or eighteen feet deep.
19. In your opinion does that at all affect the adjoining land which he now holds? Yes, as to drainage.
20. He is not able to grow such good crops? I much question if in a dry season he could grow anything in the shape of a vegetable within a chain of this cutting, on account of the drainage. Trees might be grown, but I question whether vegetables could.
21. Have you known that waterhole long? Yes, for many years.
22. Did you ever know it dry? Never.
23. *By Mr. Lee*: What would it cost, in your opinion, to make a similar waterhole, if it be possible to do so, on the rest of the land? I do not think it could be done now the cutting is there. The old waterhole was supplied, if I remember correctly, by a watercourse from the road, and now that the cutting is there, it will not be possible to get that. They could, perhaps, make the hole at a reasonable expense, but I do not think they could get the water now.
24. That waterhole must have been very valuable to him as a market gardener? Yes; his garden, except in a rainy season, could not have produced half the quantity but for his having this water to irrigate the ground.
25. *By the Chairman*: You said you did not think the property was enhanced in value by its proximity to the station, on account of sending produce to market,—do you think it is enhanced in value in other respects in any way? I do not think it is.
26. *By Mr. Holroyd*: Not by the Railway passing through it? I think not. I think that land had an intrinsic value as great before the Railway ran at all as it now has.



1856.

NEW SOUTH WALES.

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## RAILWAY COMMUNICATION.

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*Ordered by the Legislative Assembly to be Printed, 28 October, 1856.*

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To the Honorable the Legislative Assembly of New South Wales, in Council Assembled.

The Humble Petition of Stephen Hale Marsh, of Sydney,

SHEWETH,—

That your Petitioner, in the year one thousand eight hundred and forty-seven, proceeded to England, from this Colony, for the purpose of submitting to Her Majesty's Government there, a proposal to adopt a plan he conceived would achieve the means of affording the inhabitants of this country the benefit of Railway Communication in every desirable direction, and also occasion a considerable increase of Emigration, on account of the numerous advantages it would offer to all classes of society.

That, your Petitioner's object was to induce Her Majesty's Government in England to grant the public a twofold interest in Australian Railways, first, in the undertaking itself, by participating in what profits may eventually arise from it; and, secondly, in permission to select and claim from the unappropriated lands of the Colony an equal amount in land to the sums individually subscribed and paid into the Treasury for such purpose.

That your Petitioner accordingly laid his proposition on the subject before Her Majesty's Principal Secretary of State for the Colonies; and, although it was made during a period of unexampled depression in all Railway matters in England, yet it was admitted, by numerous parties who had been great sufferers in Railway transactions there, that if your Petitioner's proposed system were adopted, any amount of capital might readily be raised for the purpose; and your Petitioner was urged in every direction to persevere in his endeavours to carry it into effect.

That after a lengthened correspondence with Earl Grey, then Secretary of State for the Colonies, extending from July, one thousand eight hundred and forty-seven, to July, one thousand eight hundred and forty-eight, and several interviews with his Lordship on the subject, your Petitioner at length prevailed upon his Lordship to recommend (on account of the difficulty then presented by the Land Sales' Act—now, happily removed—to the proposal of your Petitioner).

That a commencement should be made to construct a Railway in New South Wales, by means of a Government guaranteed interest, and to give a pledge that his Lordship would inform the Government of this Colony, that should the Legislature here pass a law to carry out the proposed plan of your Petitioner, the Imperial Government would recommend to Parliament the removal of any difficulty which the Land Sales' Act might create; and his Lordship thereupon advised your Petitioner to return to the Colony with as little delay as possible, in order to further the object your Petitioner was so desirous to accomplish.

That your Petitioner respectfully entreats the careful consideration of your Honorable Assembly to his proposition for carrying out the desirable object in question, which your Petitioner has so long and earnestly endeavoured to effectuate, namely,—that a law be enacted by the Colonial Legislature to the effect that, for the purpose of promoting the construction of Railways in the Colony, the Commissioner of Railways, or other proper authority, be empowered to issue two scripts, one entitling the holder thereof to a remission in the purchase of land at any Government sale, to the amount paid by the holders of the script towards the construction of any particular Line of Railway in the Colony; and the other entitling the holders, when it shall be duly certified that the specified Line of Railway has been completed, and in efficient operation for the period of one year, to participate pro-rata, according to the amount paid as aforesaid in the profits of such Railway.

And your Petitioner humbly prays your Honorable Assembly to take into your consideration your Petitioner's aforesaid proposition, and to adopt such measures in respect thereof as to your Honorable Assembly shall seem meet.

And your Petitioner will ever pray, &c.

STEPHEN HALE MARSH.

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1857.

NEW SOUTH WALES.

Legislative Assembly.

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL."

## PROGRESS REPORT

FROM

THE SELECT COMMITTEE

ON

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"

WITH REFERENCE TO THE

PETITIONS OF HENRY HARVEY READ, STEPHEN HALE MARSH,  
AND AGAINST RAILWAY TRAFFIC ON THE SABBATH;

TOGETHER WITH

THE MINUTES OF EVIDENCE

ON THE

PETITION OF HENRY HARVEY READ.

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ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,  
25 February, 1857.

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Sydney :

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

1857.



EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

VOTES NO. 46. WEDNESDAY, 19 NOVEMBER, 1856.

13. Sole Commissioner of Railways Incorporation Bill :—Mr. Manning moved, That this Bill be now read a second time ;—  
Whereupon Mr. Cowper moved, pursuant to *amended contingent* notice,—That the Question be amended by the omission of all the words following the word “ That ” at the commencement, with a view to the insertion in their place of the words, “ this Bill be referred to a Select Committee ; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers.”  
“(2.) That such Committee consist of Mr. Barker, Mr. R. Campbell, Mr. Flood, Mr. Hay, Mr. Martin, Mr. Murray, Mr Oxley, Mr. Scott, Mr. Suttor, and the “ Mover.”  
Debate ensued.  
Question—That the words proposed to be omitted stand part of the Question—put and negatived ;—  
And Mr. Hay having required that the proposed Committee be appointed by Ballot,—  
Question—That the words, “ this Bill be referred to a Select Committee ; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers,” be inserted in place of the words omitted—put and passed.  
Question—That this Bill be referred to a Select Committee ; and that such Committee be also instructed to inquire into and Report upon the present state of the Railway Department, with power to send for persons and papers—put and passed ;—  
Whereupon the House proceeded to the Ballot, and the Speaker declared the following Members, being inclusive of the Mover of the Committee and of the Member in charge of the Bill, to be the Committee duly appointed, viz. :—Mr Cowper, Mr. Hay, Mr. Flood, Mr. Murray, Mr. Oxley, Mr. Jones, Mr. Barker, Mr. Martin, Mr. Macarthur, and Mr. Suttor.

VOTES NO. 56. TUESDAY, 9 DECEMBER, 1856.

14. Railways :—Mr. Faucett, on behalf of Mr. George Macleay, moved, pursuant to notice standing in the name of Mr. George Macleay seventh on the Notice Paper for to-day, That the Petition from Mr. Stephen Hale Marsh, presented by Mr. George Macleay on the 25th of September, be referred to the Select Committee now sitting on the Bill for incorporating the Sole Commissioner of Railways.  
Question put and passed.  
15. Mr. Henry Harvey Read :—Mr. Parkes moved, pursuant to notice, That the Petition of Mr. Henry Harvey Read, presented by him on the 8th of August, be referred for consideration to the Select Committee now sitting on the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES NO. 57. WEDNESDAY, 10 DECEMBER, 1856.

33. Railway Extension :—Mr. Hay moved, pursuant to notice, That His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony, be referred to the Select Committee for whose consideration and report was referred the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES NO. 63. SATURDAY, 20 DECEMBER, 1856.

30. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice,—  
(1.) That the Petition presented by him on the 18th instant, praying the House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.  
(2.) Mr. Gordon moved, pursuant to notice, That the Petitions presented by him on the 17th instant, from the Rev. Dr. M'Kay, and certain Members of his Congregation in Sydney, and from the Rev. William M'Intyre, and the Members of his Congregation in Maitland, praying this House to put a stop to the Desecration of the Sabbath by running of Railway Trains, &c., be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.

## VOTES No. 66. SATURDAY, 3 JANUARY, 1857.

## 13. Desecration of the Sabbath:—

(1.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 12th December last, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed and referred accordingly.

(2.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 31st December last, from the Free Church Congregations at Shell Harbour and Terry's Meadows, praying the abolition of Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 67. TUESDAY, 6 JANUARY, 1857.

## 12. Desecration of the Sabbath:—

(1.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition, ordered by this House to be printed, on the 18th November, 1856, from the Rev. James Cameron, Moderator of the Synod of Eastern Australia, against Sabbath desecration; and the Petition on the same subject, ordered to be printed on the 17th December, 1856, from the Rev. Alexander Macintyre and the Congregation assembling at Ahalton, in the County of Durham, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

(2.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition of the Free Presbyterian Congregation of Shoalhaven, presented by Mr. Gordon on the 30th December last, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 74. WEDNESDAY, 21 JANUARY, 1857.

13. Desecration of the Sabbath:—Mr. Parker moved, pursuant to notice, That the Petition of certain Members of the Church of Scotland, resident in and near Parramatta, against the desecration of the Sabbath by running of Railway Trains, presented by him on the 13th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

16. Desecration of the Sabbath:—Mr. Oakes moved, pursuant to notice, That the Petition of certain Members of the Wesleyan Congregations in the Town and District of Parramatta, against the Desecration of the Sabbath by the running of Railway Trains, presented by him on the 15th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

## VOTES No. 77. FRIDAY, 23 JANUARY, 1857.

20. Desecration of the Sabbath:—Mr. Piddington moved, pursuant to notice, That the Petition of certain Inhabitants of Singleton against the Running of Railway Trains upon the Sabbath, presented by him on 9th December, be referred to the Select Committee on Railways, now sitting.

Question put and passed.

Ordered to be referred accordingly.

## VOTES No. 79. WEDNESDAY, 28 JANUARY, 1857.

13. Desecration of the Sabbath:—Mr. Parker moved, pursuant to notice, That the Petition presented by him yesterday, from the Minister, Churchwardens, and Members of the Congregation of Saint John's Church, at Parramatta, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

14. Desecration of the Sabbath :—Mr. Cowper moved, pursuant to *amended* notice, That the Petition presented by him on the 29th ultimo, from certain Inhabitants of the City of Sydney, and of its Suburbs, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.
- 

## VOTES No. 85. FRIDAY, 6 FEBRUARY, 1857.

8. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice, That the Petition presented by him on the 3rd instant, from the Presbyterian Congregation worshipping in Macquarie-street, praying this House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.
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## VOTES No. 94. WEDNESDAY, 25 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to certain Petitions referred for their consideration and report.  
Ordered to be printed.
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1857.

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“SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL”

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PROGRESS REPORT.

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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 19th November, 1856, the “*Sole Commissioner of Railways Incorporation Bill*,” with instructions “*to inquire into and report upon the present state of the Railway Department, with power to send for Persons and Papers;*” and to whom were further referred, on the 9th December last, Two *Petitions, from Mr. Stephen Hale Marsh and Mr. Henry Harvey Read* respectively, and subsequently from time to time various *Petitions praying the House to put a stop to Railway Traffic on the Sabbath*,—have agreed to the following Progress Report:—

THE PETITION OF MR. HENRY HARVEY READ.

Having examined the Petitioner and the Secretary to the Railway Commissioners (whose Evidence will be found appended hereto,) your Committee find that Mr. Read has neglected to make his claim for compensation for the injury alleged to have been done to his property in such manner as the law requires, and therefore they do not feel justified in making any recommendation with respect to it to your Honorable House.

THE PETITION OF MR. STEPHEN HALE MARSH.

Your Committee summoned Mr. Marsh to appear in support of his Petition, but he did not attend in answer to such summons, and an impression prevails that he is not now in the Colony. Your Committee are, therefore, unable, without further information, to form any opinion upon the matters brought under the notice of your Honorable House by Mr. Marsh.

THE PETITIONS PRAYING THE HOUSE TO PUT A STOP TO THE DEDICATION OF THE  
SABBATH BY THE RUNNING OF RAILWAY TRAINS.

After carefully considering the prayer of these Petitions, your Committee are not prepared to recommend your Honorable House to prohibit by law the running of Railway Trains upon the Sabbath Day.

CHARLES COWPER,  
Chairman.

*Legislative Assembly Chamber,  
Sydney, 25 February, 1857.*

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**LIST OF WITNESSES.**

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**[PETITION OF MR. HENRY HARVEY READ.]**

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*Wednesday, 4 February, 1857.***PAGE.**

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1857.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"

WITH REFERENCE TO THE

PETITION OF MR. HENRY HARVEY READ.

WEDNESDAY, 4 FEBRUARY, 1857.

Present:—

MR. COWPER,  
MR. HAY,  
MR. JONES,MR. OXLEY,  
MR. SUTTON,  
MR. FLOOD.

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

Mr. Henry Harvey Read, called in and examined:—

1. *By the Chairman*: Are you the individual whose petition, praying inquiry into a claim for compensation, which you conceive you have against the Sydney Railway, was presented by Mr. Parkes, and referred by the Assembly to this Committee? I am.
2. You state in that petition that you have applied to the Commissioners of Railways for compensation, "but no satisfaction has been tendered, they stating that it was not in their power to do anything in the matter." Do you mean to allege that you have had no compensation offered you? Yes, I have had no compensation.
3. Are you not aware that there is a course pointed out by the Railway Act, showing how you would get redress? Mr. Wallace, the Engineer of the Railway, promised he would do something for me as soon as the works were finished. At the time the watercourse was going down there, they took about six feet of ground off my place, and blockaded my place with about two hundred tons of rough stone, which entirely stopped my business for about six months, and at the same time I could not let the shop, because it was almost smothered up with stones and rubbish of all descriptions; and then when the Railway bridge was finished, they took and put up a dead wall right in front.
4. Have you ever made any written application to the Railway Commissioners for compensation? Yes, two or three letters.
5. Have you any copy? No, I did not bring it with me.
6. Did you make a distinct claim for a certain sum of money as compensation, for the injury done to your property? No, I just left it to their honorable principles.
7. Have you not taken any advice with regard to the proper course to be pursued according to law? No, I never put anything in law concerning it. Mr. Wallace always promised me he would do something for me when the works were finished. He admitted that my business and house were completely ruined, not only as to what it has been, but what it will be. There is scarcely any road down to the stone-yard, and the shop is blockaded with a dead wall.
8. Are you not aware that by the thirty-second clause of the Railway Company's Act of Incorporation, you could apply to Justices in Petty Session to appoint Surveyors to assess the damage done to your property? No. I sent two letters, written by Mr. Wilkinson.
9. Who is Mr. Wilkinson? He was a writer in the Empire Office.
10. Were those letters addressed to the Commissioners of Railways? To the Railway Office.
11. It appears that you never made any distinct demand on the Company or the Government? Mr. Wallace kept promising me, almost to the very last moment, that he would do something, but when it was thrown into the hands of the Government, he completely turned his back on me.

Mr. H. H.  
Read.

4 Feb., 1857.

12.

Mr. H. H.  
Read.

4 Feb., 1857.

12. But your remedy was the same, after the Government took possession of the Railway, as it was before. If the sum offered you by the Commissioners was not satisfactory, you could have claimed a valuation, according to the Act—why did you not take that course? I wrote two letters to Mr. Randle, and he said he had nothing to do with it. Mr. Wallace was then on the point of going home.

13. Of course Mr. Randle had nothing to do with it—you should have applied to the Commissioners, and made a distinct claim? I went into the Commissioners' room, and they recommended me to get a petition drawn up, and sent to the Legislative Council.

14. The thirty-second clause of the Act of Incorporation points out how justice would be done to you—(the Chairman here read the clause)—why have you not taken that course? This petition was presented to your Honorable House, and laid on your Table, and I was told I should have justice done me.

15. But previous to your coming to us, you should have taken the course the law pointed out? I was not acquainted with that clause.

16. You assert in your petition, that the Commissioners stated they had no power to do anything in the matter—have you any letter from the Commissioners to that effect? I spoke to them myself, personally. I stated how it was, and they said the best way would be to put in a petition to the Council.

17. Who was it advised you to present a petition? I do not know what his name is. He sits in the right hand room at the Commissioners' office.

18. Was it the Secretary or one of the Commissioners? One of the Commissioners, I believe.

19. By Mr. Jones: Did they say they could not entertain your application? They said they could do nothing, but my best plan would be to get a petition drawn up, and presented to the Assembly, and no doubt I would meet with some redress.

C. J. Nealds,  
Esq.

4 Feb., 1857.

Charles James Nealds, Esquire, Secretary to the Railway Commissioners, called in and examined:—

1. By the Chairman: Are you aware whether any claim for compensation was made by Mr. Henry Harvey Read for injury done to his property by the construction of the bridge over the Railway in Parramatta-street? I am not aware that he ever made any specific claim.

2. You stated just now in conversation, that you found a letter from him in the office, addressed to the Company in 1855, which was referred to Mr. Wallace, the engineer, who reported that no injury had been done to Read's property? Yes.

3. Are you aware whether, since that period, Mr. Read has made any application personally, or in writing, to the Board? None whatever.

4. Has he applied to you? No.

5. Then you believe the records of the office do not show that he has made any specific claim for any particular amount? I can find no record that he has made any claim for any amount whatever. The only record is, that his letter was referred to the engineer, who reported that no injury had been done to his property. Since that period there is not a word to show that any application has been made.

1857.

NEW SOUTH WALES.

Legislative Assembly.

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“SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL.”

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# SECOND PROGRESS REPORT

FROM THE

THE SELECT COMMITTEE

ON THE

“SOLE COMMISSIONER OF RAILWAYS  
INCORPORATION BILL,”

TOGETHER WITH

THE MINUTES OF EVIDENCE.

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ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

27 February, 1857.

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SYDNEY:

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,

PHILLIP-STREET.

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1857.



EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

13. Sole Commissioner of Railways Incorporation Bill :—Mr. Manning moved, That this Bill be now read a second time ;—  
Whereupon Mr. Cowper moved, pursuant to *amended contingent* notice,—That the Question be amended by the omission of all the words following the word “That” at the commencement, with a view to the insertion in their place of the words, “this Bill be referred to a Select Committee; and that such Committee be also instructed “to inquire into and report upon the present state of the Railway Department, with “power to send for persons and papers.”  
“(2.) That such Committee consist of Mr. Barker, Mr. R. Campbell, Mr. Flood, “Mr. Hay, Mr. Martin, Mr. Murray, Mr Oxley, Mr. Scott, Mr. Suttor, and the “Mover.”  
Debate ensued.  
Question—That the words proposed to be omitted stand part of the Question—put and negatived ;—  
And Mr. Hay having required that the proposed Committee be appointed by Ballot,—  
Question—That the words, “this Bill be referred to a Select Committee; and that “such Committee be also instructed to inquire into and report upon the present “state of the Railway Department, with power to send for persons and papers,” be inserted in place of the words omitted—put and passed.  
Question—That this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and Report upon the present state of the Railway Department, with power to send for persons and papers—put and passed ;—  
Whereupon the House proceeded to the Ballot, and the Speaker declared the following Members, being inclusive of the Mover of the Committee and of the Member in charge of the Bill, to be the Committee duly appointed, viz. :—Mr Cowper, Mr. Hay, Mr. Flood, Mr. Murray, Mr. Oxley, Mr. Jones, Mr. Barker, Mr. Martin, Mr. Macarthur, and Mr. Suttor.

VOTES No. 56. TUESDAY, 9 DECEMBER, 1856.

14. Railways :—Mr. Faucett, on behalf of Mr. George Macleay, moved, pursuant to notice standing in the name of Mr. George Macleay seventh on the Notice Paper for to-day, That the Petition from Mr. Stephen Hale Marsh, presented by Mr. George Macleay on the 25th of September, be referred to the Select Committee now sitting on the Bill for incorporating the Sole Commissioner of Railways.  
Question put and passed.  
15. Mr. Henry Harvey Read :—Mr. Parkes moved, pursuant to notice, That the Petition of Mr. Henry Harvey Read, presented by him on the 8th of August, be referred for consideration to the Select Committee now sitting on the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 56. WEDNESDAY, 10 DECEMBER, 1856.

33. Railway Extension :—Mr. Hay moved, pursuant to notice, That His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony, be referred to the Select Committee for whose consideration and report was referred the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 63. SATURDAY, 20 DECEMBER, 1856.

30. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice,—  
(1.) That the Petition presented by him on the 18th instant, praying the House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.  
(2.) Mr. Gordon moved, pursuant to notice, That the Petitions presented by him on the 17th instant, from the Rev. Dr. M'Kay, and certain Members of his Congregation in Sydney, and from the Rev. William M'Intyre, and the Members of his Congregation in Maitland, praying this House to put a stop to the Desecration of the Sabbath by running of Railway Trains, &c., be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.

VOTES No. 66. SATURDAY, 3 JANUARY, 1857.

13. Desecration of the Sabbath :—

(1.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 12th December last, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed and referred accordingly.

(2.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 31st December last, from the Free Church Congregations at Shell Harbour and Terry's Meadows, praying the abolition of Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 67. TUESDAY, 6 JANUARY, 1857.

12. Desecration of the Sabbath :—

(1.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition, ordered by this House to be printed, on the 18th November, 1856, from the Rev. James Cameron, Moderator of the Synod of Eastern Australia, against Sabbath desecration; and the Petition on the same subject, ordered to be printed on the 17th December, 1856, from the Rev. Alexander Macintyre and the Congregation assembling at Ahalton, in the County of Durham, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

(2.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition of the Free Presbyterian Congregation of Shoalhaven, presented by Mr. Gordon on the 30th December last, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 74. WEDNESDAY, 21 JANUARY, 1857.

13. Desecration of the Sabbath :—Mr. Parker moved, pursuant to notice, That the Petition of certain Members of the Church of Scotland, resident in and near Parramatta, against the desecration of the Sabbath by the running of Railway Trains, presented by him on the 13th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

16. Desecration of the Sabbath :—Mr. Oakes moved, pursuant to notice, That the Petition of certain Members of the Wesleyan Congregations in the Town and District of Parramatta, against the Desecration of the Sabbath by the running of Railway Trains, presented by him on the 15th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

VOTES No. 77. FRIDAY, 23 JANUARY, 1857.

20. Desecration of the Sabbath :—Mr. Piddington moved, pursuant to notice, That the Petition of certain Inhabitants of Singleton against the Running of Railway Trains upon the Sabbath, presented by him on 9th December, be referred to the Select Committee on Railways, now sitting.

Question put and passed.

Ordered to be referred accordingly.

VOTES No. 79. WEDNESDAY, 28 JANUARY, 1857.

13. Desecration of the Sabbath :—Mr. Parker moved, pursuant to notice, That the Petition presented by him yesterday, from the Minister, Churchwardens, and Members of the Congregation of Saint John's Church, at Parramatta, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

14. Desecration of the Sabbath :—Mr. Cowper moved, pursuant to *amended* notice, That the Petition presented by him on the 29th ultimo, from certain Inhabitants of the City of Sydney, and of its Suburbs, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.
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## VOTES No. 85. FRIDAY, 6 FEBRUARY, 1857.

8. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice, That the Petition presented by him on the 3rd instant, from the Presbyterian Congregation worshipping in Macquarie-street, praying this House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.
- 

## VOTES No. 94. WEDNESDAY, 25 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to certain Petitions referred for their consideration and report.  
Ordered to be printed.
- 

## VOTES No. 96. FRIDAY, 27 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—  
(1.) Mr. Cowper, as Chairman, brought up a Second Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 19th November last, together with the said Bill as amended by the Committee.  
Ordered to be printed.  
(2.) Mr. Hay then moved, That the second reading of this Bill stand an Order of the Day for Wednesday next.  
Question put and passed.
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1857.

SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL"

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**SECOND PROGRESS REPORT.**


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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 19th November, 1856, the "*Sole Commissioner of Railways Incorporation Bill*," with instructions "*to inquire into and report upon the present state of the Railway Department, with power to send for Persons and Papers;*" and to whom were further referred, on the 9th December last, Two *Petitions*, from Mr. Stephen Hale Marsh and Mr. Henry Harvey Read respectively, on the 10th of the same month "*His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony;*" and subsequently from "*time to time various Petitions praying the House to put a stop to Railway Traffic on the Sabbath,*" and who on the 25th instant brought up a *Progress Report* in reference to the said *Petitions*,—have agreed to the following Second Progress Report:—

Your Committee, having examined the Chief Commissioner for Railways, and the Engineer-in-Chief to the Railway Commissioners (whose evidence will be found appended hereto), proceeded with the various Clauses of the Bill, in the consideration of which they found it necessary to make *several* amendments; and your Committee now beg to lay before your Honorable House the Bill as amended by them.

CHARLES COWPER,  
Chairman.

*Legislative Assembly Chamber,  
Sydney, 27 February, 1857.*

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## LIST OF WITNESSES.

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1856.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

## SOLE COMMISSIONER OF RAILWAYS BILL.

WEDNESDAY, 3 DECEMBER, 1856.

Present:—

MR. BARKER,  
MR. COWPER,  
MR. FLOOD,  
MR. HAY,

MR. MACARTHUR,  
MR. MARTIN,  
MR. OXLEY,  
MR. SUTTON.

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

Gother Kerr Mann, Esq., Chief Commissioner of Railways, called in and examined:—

G. K. Mann,  
Esq.

1. *By the Chairman*: Have you read through the Bill now before this Committee? I have.
2. As the Committee have determined to alter the system of management under which Railways have hitherto been conducted, and to recommend that there shall in future be a department of the Government for this purpose, do you not think that a great deal of this Bill would, under those circumstances, be unnecessary? There are Clauses in this Bill which appear to me unnecessary; irrespective of that view, there might be a legal question as to whether they might be omitted, or not; but certainly, under the altered circumstances that you now mention, I think the Bill will require to be generally changed and modified. This Bill is prepared entirely with the view of incorporating the Commissioner.
3. All these Clauses with respect to empowering the Commissioner to enter into contracts, make appointments, regulate the tolls, and so on, will be unnecessary, provided the department be made a department of the Government? I should hardly think they would be necessary. If it be determined that the Commissioner shall not have the power to act definitely, I would merely insert under particular Clauses, "with the approval or sanction of the Government."
4. What occasion is there to give him any powers any more than the Surveyor General, or any other head of a department under the Government—it would be the Government that would have to do all these things, whoever might be at the head of the department? I think the officer in charge of Railways should have extra powers for works of a nature that admit of delay. That officer will be called upon to act more promptly in the management and arrangement of his department, generally speaking, than officers of other departments would have to do. There are some matters which do not admit of time for reference, particularly in the working of Railways.
5. What matters do you specially allude to? I alluded more particularly to the working of the Railways when I last spoke; but I think myself that the powers proposed by this Bill to be given to the Commissioner for adjusting land claims, would be a means of expediting the public business considerably.
6. Do you think it would be necessary to incorporate the Commissioner, with a view of settling land claims, and solely with that object? It appears to me that doing so gets over a great number of difficulties. It enables the Commissioner to act definitely in accordance with the provisions of this Bill; and it definitely settles those claims which otherwise might remain open for a considerable time.
7. The powers required are very much the same as those conferred on the Surveyor General with reference to the making of roads.—The land is taken, and if the parties are dissatisfied, then these questions are referred to arbitration? Not exactly. I believe the powers here are greater, and that it is necessary they should be greater. The works of a Railway must

3 Dec., 1856.

G. K. Mann, Esq., be carried on with much more expedition than the works of a common road; and it is therefore very desirable that land claims should be settled as expeditiously as possible.

3 Dec., 1856. 8. In the event of the engineers determining that a particular direction shall be the proper course for a Railway to take, certainly if the Act gave to the Commissioner power to take the land required in the same way as to the Company, that would meet the difficulty. It does not matter whether it is a Company or an officer of the Government who is authorized to take the land when it is once surveyed. The marking of it out is the act of taking possession, and the parties then have their remedy by proceeding for a valuation? They have. 9. Could you not make the Commissioner of Railways the party to take the land, without incorporating him? I am under the impression that it removes many legal difficulties to incorporate the Commissioner. A company would act as a corporate body.

10. *By Mr. Hay:* Can you inform the Committee what are the points of contact between the management and construction of a Railway, and whether it would be possible to separate the different branches of those departments? Hitherto the construction and the management of the Railway have been separated up to a certain point; but it is very difficult to determine the exact point where the management, construction, and maintenance of a Railway separate. For instance, the continued maintenance of the way, which is a very considerable item of expenditure in Railway management, and the increase of which keeps pace with the increase of the traffic, must be directly under the management of the Engineer.

11. Do you include the rolling stock? It is generally the custom in England to have that in a department which is under the Engineer of the line. Keeping in repair the rolling stock is a portion of the duties which must be directly under the engineer of the line.

12. *By Mr. Barker:* Having a mechanical Engineer under him? Having a mechanical Engineer under him. The Superintendent of rolling stock is directly under the Engineer, and answerable to him. The general management of the traffic, and the collection of the tolls for the conveyance of goods and passengers would come of course directly under the Manager of the line, with whom the Engineer as nothing to do.

13. *By Mr. Hay:* Do you think that the safety of the public would be sufficiently regarded by entrusting the Engineer, however capable, with the financial part of the business? No; I think the engineering of the line should be distinct from the general management of the line up to a certain point, where they amalgamate, and then they should come under one head, so that they might work in unison and conformity together.

14. *By Mr. Barker:* Will you state the way in which we manage now with Mr. Brady, and the object we have in Mr. Brady being so placed, that he looks after the line and the management, at the same time? It so happens, that at this present moment, we are working the line by our Engineer; but I question whether that system could be carried out on a very extensive scale. I think when our Railways increase we shall have to separate the management from the duties of the Engineer. I do not think he could do the two duties.

15. *By Mr. Hay:* Have you felt any inconvenience from that arrangement yet? No; but as his other duties increase, he may be occupied at a distance from the line in operation. I think it very probable we shall have to make a change.

16. Still he is under you? Yes.

17. *By Mr. Oxley:* Do you not think it is an entirely different business from an Engineer's to look after passengers and goods,—that in fact an Engineer is scarcely competent for that duty? I think that is a portion of the duty which comes under the general management, but the Manager must be in very close communication with the Engineer, to see that his rolling stock is in good condition, the line in proper order, and that the machinery for working the line is forthcoming. All these arrangements he must make in close connexion with the duties of the Engineer. But the actual management, the collection of tolls, and the general management of the Railway, ought to be under a distinct Manager, who need not be an Engineer.

18. *By Mr. Macarthur:* Should the Engineer be, in any case, subordinate to the Manager? He is, in one or two instances, on the English lines. The Manager on the Great Western Line appears to be the head officer of the whole line, and the Engineer is, in fact, a subordinate officer.

19. In some of the English lines, I think the management is vested in the Secretary, under the Chairman? Yes. In many of the lines the Manager cannot interfere with the Engineer in any engineering duties, but he would call upon him if he required additional locomotives on the line, or rolling stock, and after that it becomes the province of the Engineer to attend to it.

20. *By Mr. Hay:* The whole management is in the hands of the Chairman? In the Chairman and Secretary of the Board.

21. *By Mr. Cowper:* On that very principle here, the Chairman of the Board would be represented by the Secretary for Lands and Public Works, and the Manager and Engineer would be responsible to him? The duties of the different officers concentrate, and come under the supervision of one head.

22. *By Mr. Hay:* The question is whether the Secretary for Lands and Public Works, or a Commissioner of Railways, shall occupy the analogous position to that of the Chairman of the Board at home? You must put the Chairman of a Company at home in the position of the head of a department, for he is so to a certain extent, as companies exist at home, responsible to a quasi Minister of Public Works, inasmuch as he is responsible to the Board of Trade, I believe. The Board of Trade stands in the same relative position to a Company, or the Chairman of a Company, who is the head of that particular department, as the Minister of Public Works would stand in with reference to the head officer of the Railway department here, only that this being more directly a Government establishment, of course the relative positions are much more distinct. I do not see the possibility of working Railways without one distinct head, through whom the Engineers and Managers of the various lines should communicate, he himself communicating with the Minister of Public Works.

23. You do not think a head liable to be removed with every change of Ministry would answer the purpose? I think not. I think the great amount of detail which necessarily takes place in the construction and working of a line of Railway, varying in different localities, must all be arranged and brought before the Minister in a proper form, by the head of the department.

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24. *By Mr. Barker*: It would occupy the attention of any person fully? Yes, fully.

25. *By the Chairman*: After all, all this could be done by the Engineer-in-Chief? I do not think the Engineer is the proper person to be Manager of the various lines, and of the departmental detail.

26. *By Mr. Hay*: You have no general Manager now? No. These are subordinate officers of the department. We should require to have a Resident Engineer on every line that is in course of construction, and certainly these Resident Engineers should be under the direct management of the Engineer-in-Chief, whose duty it would be to check their work.

27. *By the Chairman*: Do you want a Commissioner of Railways over the Engineer-in-Chief? Most certainly, for the general management of the whole department.

28. *By Mr. Hay*: Then, according to your opinion, we should require two highly salaried functionaries, one a Commissioner, and the other the Engineer-in-Chief, under the Commissioner? I think so.

29. What do you conceive ought to be the functions of this head man between the Minister of Public Works and the Engineer? The general control—all that is proposed to be carried out by this Bill.

30. Do you contemplate his being a professional man? I do not think it is absolutely necessary that he should be so, but I think you ought to have a Commissioner who should be able to report and express his opinion to the Government upon the expenditure proposed by the Engineer. I think he ought to be able to check that.

31. It is intended to bring this department under the Board of Works—would not that be a check? I hardly think so.

32. That is the check on the Surveyor General and Colonial Architect? You would require the head Commissioner to form a portion of the Board of Works; he would be in the same relative position as the Surveyor General and the Colonial Architect.

33. If you think it necessary to have this Commissioner as the head of the Railway Department, do you think it is really necessary, in conjunction with the Engineers of the different lines, to have a general Engineer, with power over all the other engineers—is it necessary to have the general Engineer at all? As Railways extend I think it will be necessary, but I do not think it is necessary with the limited amount of Railway work now in progress; with the extension of Railways decidedly it will be necessary.

34. Supposing you had an Engineer for the Hunter River Railway, and an Engineer for the other Railways—or two others, one for the Southern and one for the Western line, these men would require to be very capable and highly qualified men? Yes.

35. And having such men, would it be necessary to have a fourth man, with a much higher salary, merely to oversee these gentlemen? There is a great deal of detail in the engineering of a line, and it is very desirable to have the best advice on these engineering matters; it may be the means of saving considerable outlay in the construction of a Railway.

36. Do you not think the expense would be more beneficially incurred by getting all these three men of as high character as you propose the Chief Engineer to be, and even dividing, if necessary, the salary of the fourth man amongst them, so as to secure high qualifications? I do not think that would meet the case.

37. There would then be three first-class Engineers, having the same relation to the head of the department? Hitherto we have done without a Chief Engineer, having been able to go into these matters ourselves; but I think when Railways extend it will be necessary to have a Chief Engineer, although I am not quite prepared to say whether it will be necessary with two or three short lines.

38. You formerly had an Engineer of considerable reputation, Mr. Wallace? Yes; he came out to the former company.

39. Do you think matters have been much worse managed since he left you, under the second-class engineers you now employ? I believe we have managed to do the engineering work as well as before, and at considerably reduced cost. I certainly do not think there is occasion for an Engineer-in-Chief for one short line.

40. *By Mr. Cowper*: You say you have done the work considerably cheaper since Mr. Wallace left—can you give the Committee any information as to the way in which the excess of expenditure was incurred in his time. Have you ever been able to satisfy yourself as to the way in which that large expenditure was incurred in the actual cost of the Liverpool line over the estimated expenditure? There never was a complete estimate for the Liverpool line, I think.

41. The Government professed to give the Council estimates, and asserted that they had most correct estimates at the time? All that I have found was that there was an estimate for the formation and laying down of the permanent way of the main line, and that was put down at a round sum of £100,000, I think; but there was no estimate for stations or sidings, and different arrangements of that kind. This contemplated single way work only; the line has been constructed into double way work, which of itself made an addition of about £15,000.

42. *By Mr. Macarthur*: Who made out that estimate? I do not know.

43. Was it made out in Mr. Wallace's time? Yes.

44. *By Mr. Barker*: If we were constructing Railways to the west, south, and north, do you not think we should be constructing them with much more certainty of success, and at much less cost, if we had a competent Engineer to overlook the whole, and particularly to see that the lines ran where they ought to be, before the work commenced? I think that is a point where the supervision of an Engineer-in-Chief would be very valuable to the Government. He might often point out the means of avoiding a considerable outlay.



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45. *By the Chairman*: Under whose instructions are the surveyors now laying down lines throughout the country? Surveyors are engaged, under the instructions of the Surveyor General, in examining the country, with a view to determine the most eligible lines for the Railways.

46. Without reference to the Railway Department? The Surveyor General communicates with the Railway Department, sending in the plans and surveys. The actual survey and marking out of the lines do not come into the hands of the Railway Department until the line has been surveyed, and sufficient information has been given by the Surveyor General to enable them to mark out the line. The only surveys, for instance, that the Railway Department has done, were the surveys of the Campbelltown Extension and of the West Maitland and Newcastle Extension; beyond that the surveys have been entirely executed by the Surveyor General.

47. Surveyors are now exploring the country between Parramatta and Penrith? Yes.

48. Under whose instructions? Under the instructions of the Surveyor General.

49. The Railway Department has no cognizance of those instructions? The direct instructions under which they are acting are given by the Surveyor General. In the first instance, the Railway Department communicated with the Surveyor General, when they knew that these surveyors were going out, requesting that he would explore the country in different directions. For instance, we mentioned that we wished the country explored with a view of carrying a line westward, indicating merely the general direction in which we wished to run the line, and leaving the details entirely to him. The same was the case with reference to an extension of the Hunter River Railway, and also of the line to the southward; further than that we have had nothing to do with the details of the survey.

50. Are those officers paid by the Surveyor General? Yes.

51. *By Mr. Macarthur*: Has there been any party exploring the line from the Hawkesbury in the direction of Bathurst? There have been explorations to the westward to the valley of the Hawkesbury, and although I have no official accounts of the actual state of those surveys, I understand that the country is generally favourable.

52. Have there been any from the Hawkesbury upwards? I do not know of any explorations beyond that. There have been some general ones, but no report of a favourable line has reached me.

53. *By Mr. Barker*: The surveyors engaged on these surveys are paid out of the vote of £50,000 that was passed last year for this purpose? Yes.

54. *By Mr. Hay*: What has been the course latterly with regard to the selection of lines of Railway from the first initiative surveys to the final proclamation of the lines? We have in no instance yet proclaimed a portion of any line that has been surveyed by the Surveyor General. The Campbelltown Extension was in so advanced a state, that it was unnecessary to call upon that officer to put any surveyors upon it. When these railway surveyors were appointed, we communicated with the Surveyor General, requesting him to examine the country from the termination of the survey to the southward, from Menangle, with a view of carrying the line to the southward to Goulburn, leaving it entirely open to him to examine the country in any direction. He has sent us the tracings of the surveys that have been made, from which we have compiled certain information, and returned them, requesting that the country might be further examined, in particular localities. The same step was taken with regard to the Hunter River line. We requested that he would examine the country from the termination of the present contract, with a view of carrying the line up the valley of the Hunter, the object being to attain, eventually, the Liverpool Plains. We have had some very good surveys from that district, which have afforded us a good deal of information. We are now on a portion of that survey, marking out the line to West Maitland by our own surveyors. The same instruction was given for a Railway in the north, with a view of attaining some point on the Darling Downs; and we have got surveys in lately from the surveyors that have been employed in that direction, but we have not been able to come to any determination on the point.

55. Take the Western Line, from Parramatta. You say a great many surveys have been made on that line—who will determine as to the particular line to be adopted? It is our duty, at present.

56. Upon what will you decide? Upon the sections we receive from the Surveyor General, and the survey of our own Engineers. We receive the plans from the Surveyor General, and hand them to our Engineer to examine and report upon, and he marks out what appears to him the most desirable line.

57. Does he go on the ground? From the plan and from an inspection of the ground—he ought to do both.

58. Do you take into account any considerations of traffic, or simply the engineering facilities? The traffic is generally at the extremity of the line, and the object is to reach that by the most direct course.

59. You will observe that, in particular parts of the country, where there are villages and agricultural population in various directions, it may be of great importance that the Railway should not go direct to a point, but that you should select, in taking it to the Hawkesbury, for instance, a particular line, even though it might be a little longer, or a particular point as your Terminus in the valley, on account of the traffic that would thus be brought to the Railway—by what considerations are you guided in such cases? At present we should be guided by the straightest line, the shortest possible one. I do not think the traffic on that short distance would affect the question much.

60. Would you adopt a line without consideration as to the character of the country, as to its fertility or otherwise? The character of the country so far as it affected the cost of making the line would be considered, but its fertility would not be considered—at least no such case has actually come before as yet. There might be instances where it would be very desirable to diverge.

61. Do you not think it is desirable that the Executive Government should directly interfere in the selection of lines of Railway with regard to these points? I think so. It is the duty of the Government.

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62. There may be other things than the engineering facilities of the line to make it advisable or otherwise? Exactly. We conceive that is a point in which the Executive Government should interfere directly; but the lines have hitherto been so short that no question of the sort has arisen. There is no doubt, but that the rich districts of the country ought to be the general direction to which a line ought to lead.

63. *By Mr. Barker*: Do you not think that it is most important to consider three points in the construction of Railways; first of all the straightest line, secondly, the least expensive, keeping as straight as you can, and, thirdly, to take in as much good country as you can that is productive? These are the three points which should guide any officer in the selection of a line; the nearer he can get to them the more likely he will be to be correct in his conclusions for the general direction. But I think myself that a straight line is very advisable, and that the traffic should be picked up by branches, instead of by diverging.

64. *By Mr. Suttor*: In the event of your having a Chief Engineer, would the others for the different lines be mere working or mechanical Engineers? No; you would require to have a Resident Engineer on each line, and always will be obliged to have one. You will eventually be obliged to have a Resident Engineer at every fifty or sixty miles of Railway.

65. *By the Chairman*: Are you not aware that considerable dissatisfaction exists in the public mind as to the high rates of fares now charged on the Sydney Railway? I have heard it complained about.

66. Do you think there is any foundation for the complaint? I do not think they ought to complain.

67. What has been the effect of the high rates upon the revenue—has it increased or diminished? The revenue has increased, but the number of passengers has decreased.

68. The total amount received is greater? It is.

69. Is it a fact that one, two, or three of the omnibuses that formerly ran on the Parramatta Road have commenced to run again since the Railway charges were increased? I have heard it is the case, but I do not think that question bears upon the amount of the fares; because, in the first place, it is not proved that these omnibuses will continue to run, and, in the second place, the more people they put in motion the better for the Railway—if a coach takes up a number of passengers, they will all probably come back by the Railway.

70. Does that follow? It would generally be the case, I think; but I may be wrong. However, I am of opinion that, considering the price of labour in this country—for instance, a navy gets from ten shillings to twelve and sixpence a day, whereas in England his wages are about three shillings and sixpence a day—the price that has been fixed for the fares is exceedingly moderate. The scale upon which the prices are fixed in England is three-pence, two-pence, and a penny per mile, for first, second, and third class; here the scale is the same now as that which they originally started with, and to which there was no objection in the first instance, namely, four-pence, three-pence, and two-pence per mile for the three classes respectively. When first the Railway was opened the fares were arranged upon this scale, and they were lowered with the idea that the traffic would considerably increase, but it did not do so, though it has decreased since we have raised them again. I think if we had had a fair trial there would not have been that decrease.

71. Was not your traffic to Newtown very much increasing? No, it did not increase to a very great extent, though the fares were lowered to a nominal rate. Our season tickets are cheaper now than they ever were before.

72. Still a great degree of dissatisfaction has existed as to the charges for single tickets for daily traffic? Of course the Commissioners were without any definite information as to the proper price that should be charged, and they think these rates ought to be tried for some little time to see what will be the effect.

73. *By Mr. Macarthur*: Do you know what the rate is as compared with the rates charged by the coaches? I do not know what the coaches are charging, but it must be borne in mind that the Railway is not a Railway to Parramatta; it involves other expenses, and therefore can hardly be expected to compete with the steamers and coaches that run direct to the town, but, nevertheless, it does do so.

74. *By the Chairman*: As you are running the Railway, do you not think it desirable to have the rate so low as to attract all the traffic both of goods and passengers? That is the object I have always had in view. Keeping in view the amount of revenue.

75. Is it not the fact, that by raising the fares lately you have repelled the traffic? The number of passengers has decreased, but I think there is a tendency to increase again; and if they increase to the original number at the present price, it will show whether the Commissioners are enabled to reduce the rate again. I think the rate we are charging is only the correct rate that ought to be charged, according to the scale of wages we are obliged to pay. We have introduced this month the system of return tickets, which are customary on the English lines, and which we think the public are entitled to here. It is, of course, a question whether the revenue could be considerably increased by a reduction of the present rate, and, of course, it would be wrong to retain it if we found that it could be; but I think we are bound to find out what is the proper price, and then we should be justified in adhering to it.

76. *By Mr. Macarthur*: Is the goods' traffic increasing? Very considerably. There is a marked increase in the goods' traffic.

77. *By Mr. Oxley*: Are you aware that carriers can cart to Sydney for three shillings a ton over the prices you are charging? All the year round?

78. All the year round? We have no complaints about goods' rates. The goods' traffic is going on increasing rapidly at the present rate.

G. K. Mann, Esq. 79. *By Mr. Suttor*: Could you give the Committee any idea of the quantity of wool brought down by the Liverpool Railway? Really I do not know without reference, but it has been very small indeed.

3 Dec., 1856. 80. *By Mr. Macarthur*: You have said that the goods' traffic is very greatly increased? Yes.

81. Have you considered whether, in a new country like this, it is not more important to look to the goods' traffic than the passenger traffic—whether the goods' traffic is not likely to increase in a greater ratio than you can contemplate with reference to the passenger traffic? Looking to the population of the country, I should think the goods' traffic will be the one to depend on for some time to come, and that it is one that should be encouraged.

82. Are you aware what has been the case in America in reference to this point on their great lines? I have not seen anything on the subject, but I have heard that it has entirely changed the whole features of the country. I hardly think that there is an analogy between the American Railways and Railways in this country, for two reasons—one, that they have population there already, and another that they have a vast extent of valuable country, which only requires to be got at to become productive and populous; immediately it becomes a city, town, or settlement, in a very short time, by merely running a Railway to it. I doubt whether we have these facilities in this part of the world, and that it would be worth while running a Railway into the wilderness.

83. Have you heard that a considerable portion of the goods in America that used to be conveyed by the great rivers, are now conveyed by the Railways? I have heard that is the case, and I think it the natural result of Railway communication.

84. *By Mr. Oxley*: Do you not think that, as the line increases in length and ramifications, you will be enabled to carry at a material decrease on the present rates of freight? I think it possible that we shall be able to reduce the rates, but at the same time, I would say that the reduction ought to depend on the cost of labour for the construction and maintenance of the Railway. If labour were to increase considerably in price, I hardly think we ought to reduce the rates of carriage.

85. As a matter of fact, the working of the line to Liverpool now costs nearly as much as it will do when it is opened to Camden? I think a greater extent of Railway could be worked at a cheaper rate than a short line. For instance, the Engineer's salary is chargeable on twenty-two miles of rail, though he could look after sixty miles. By calculating in that way, in that as well as in other matters, it is very likely our rates for passengers and goods might be materially decreased.

86. You would conclude from that, irrespective of the convenience of the public, that we cannot expect these short lines to pay as if they were extended to a greater distance? Certainly not. I do not think the present line is sufficiently long to test the advantage of Railway traffic.

87. *By Mr. Macarthur*: It stands to reason, that if you carry a Railway line into a productive country capable of supplying the Sydney markets to a large extent, the increase of traffic will be very considerable? Decidedly.

88. *By the Chairman*: Do you contemplate the next contracts being taken at a considerable reduction on those that preceded you, or can you express an opinion on the matter? I have not been able to form a decided opinion, but I am under the impression that they will be. It is difficult to give data, but still I have that impression. I hope we shall have a considerable competition for them, and that will always reduce them.

89. *By Mr. Oxley*: Do you not think that, if the Government were to call for tenders for very extensive works at once, they would be taken at much lower rates than when only small portions at a time are contracted for? I certainly think a long line could be constructed at a much cheaper rate if contracted for in one lot. I think, if the intention of the Government to make Railways on a large scale were made known in England, we should have contractors take them up at home, and bring labour out with them.

90. Do you not think a contractor taking up twenty miles of Railway, and not knowing when any other contract may be called for, calculates the cost of his plant as wholly chargeable to that work, whereas, if he were sure of being able to get another contract after the completion of the first, he could throw that item, in a great degree, out of the calculation, and thus the Government would be more likely to benefit? Yes, decidedly. I think we would be much more likely to get the contracts taken at a low rate in proportion to the extent of Railway.

91. Do you not think it would likewise tend very much to bring out a superior class of immigrants, if very large contracts could be taken, inasmuch as the contractor would probably send out their own navvies at their own expense? I think they would. Large contractors would come out fully provided to carry out these contracts, and it would be worth their while to go to considerable expense in insuring their speedy completion, and to that end I believe they would be induced to bring with them powerful working forces.

92. For the experimental line we have at present made, it would not have paid a contractor to send out rolling stock and navvies? Not navvies, and scarcely rolling stock or extensive plant.

FRIDAY,

FRIDAY, 16 JANUARY, 1857.

Present:

MR. COWPER,  
MR. FLOOD,  
MR. JONES,

MR. HAY,  
MR. MARTIN,  
MR. SUTTON.

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

John Whitton, Esquire, called in and examined:—

J. Whitton,  
Esq.

16 Jan., 1857.

1. *By the Chairman*: You have recently arrived in the Colony, as Chief Engineer of Railways? I have.
2. Under appointment from the Government? Yes.
3. Have you looked through the Bill which has been referred to this Committee, for the incorporation of the sole Commissioner of Railways? I have.
4. Have you any suggestions to make with reference to any clauses in it which you think might be improved? I have. The first one is at page 23, line 30; it is a matter of very small importance, merely as to the term "practical surveyor."
5. You think a better term might be used? I think so; although a person might be a surveyor he might not be a valuer. I think a person employed on business of this kind should be a man accustomed to settling claims for compensation—not only a surveyor, but a man accustomed to this particular business—what is usually called a valuer.
6. What is the qualification such an officer should possess? In England a "surveyor" is a man usually accustomed to measuring land, and he may have had no experience whatever as a valuer, that is to say, in settling the compensation that any person ought to have in cases of this kind.
7. What is a valuer? A man accustomed to settling claims for compensation as to damage.
8. Does he follow that business as a separate vocation? Many valuers are not surveyors. They employ people to make the plans, and value upon them. It is a matter of very small importance, but it is a term that struck me as rather indefinite.
9. You think a term of wider meaning might be used? I think so.
10. Not limiting the valuer to the profession of surveyor? Just so.
11. Will you go on to your next suggestion? The next one is at page 43, and applies to the whole of Clause 89. That clause orders that the Commissioner shall, within a certain number of years, sell all superfluous lands which shall have been taken for the purposes of the Railway, and shall not have been required; and also that, if the Commissioner neglects, within a certain number of years, to sell those lands, they shall then become the property of the owners of the land adjoining. The first question I see in the matter is, who is to be the judge as to whether any land is superfluous or not; and, secondly, whether it would be wise for the Government to give away their lands because the Commissioner neglects his duty in not selling them.
12. It does not appear to assume neglect of duty on the part of the Commissioner so much as to enact authoritatively that lands not required for the purposes for which they were taken shall be sold? But if the Commissioner neglects to sell the land the owners on each side can take possession. There can be no objection, of course, to giving the Commissioner power to sell the lands, but I do not think he should be compelled to sell them. A serious question may arise as to what lands are superfluous, and who is to decide it.
13. You are aware that similar clauses are contained in the English Railway Acts? I am not aware of it. I never saw them. But if there be, I think they are very objectionable. In England, of course, lands purchased for Railways belong to private companies; it is a very different affair altogether.
14. Then you would suggest that all the words following the word "Act," in the seventh line, should be omitted? I would suggest that the Commissioner should not be compelled to sell at all; in short, that the whole Clause should be omitted.
15. Then the following Clauses—90, 91, and 92, should also be omitted? Yes.
16. *By Mr. Jones*: You would leave the Government to deal with these lands precisely as they would deal with any other lands? Yes. These lands, at the expiration of the term of years, may be fifty times as valuable as they were at the time they were purchased; and, if so, why should you be compelled to sell them, or, neglecting to sell them, why should they be given away.
17. *By the Chairman*: Will you have the kindness to state the next clause upon which you have any observation to make? The next clause is the 104th, at page 49. It is as to referring the determination of the accommodation to be given to landowners through whose land a Railway may pass, to two Justices. My own opinion is, that that would be objectionable. The two following clauses also relate to the same point.
18. What suggestion have you to make with reference to them? If the Commissioner shall not execute certain works within a certain time, these clauses give power to the owner of the land himself to execute those works.
19. Do you object to that? I decidedly object to that. I think no landowner ought to have power to take possession of a Railway, and make what works he thinks proper.
20. You propose to erase the 105th clause altogether? Yes, the 105th and 106th.
21. And you think the 104th might be amended by conferring the power there proposed on the Governor and Executive Council, instead of on the Justices? Yes; and that the works, of course, shall be made with the sanction of the Commissioner.
22. Are you not prepared to accept the 106th clause as proposed to be modified by substituting the words "the Governor and Executive Council" for the words "such Justices," and by striking out the words following the word "Commissioner" at the end of the clause? Yes.

- J. Whitton, Esq.  
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23. Will you now pass on to the next clause on which you have any suggestion to make? The next is at page 52, the twenty-first line. The only alteration I wish to make there is, to take out the words "off-set plates," and insert, after "rails," "crossings, switches, and sleepers." Off-set plates here I assume to mean crossings, but it is not a term that is in use now. The next alteration I propose is at page 53, clause 114.
24. Which you propose to omit? Which I propose to omit.
25. Will you state your reason for wishing that clause to be omitted? This clause gives power to any person who thinks proper to purchase an engine or carriage, to run that engine or carriage on the Railway, upon payment of the tolls. I think it very objectionable to give any person power to run an engine or carriage over the line.
26. You would have no carriages or engines run there, but those belonging to the Government? None whatever, except by the consent of the Commissioners. Waggon's are, of course, generally used on Railways belonging to private parties, but only by consent.
27. *By Mr. Jones*: They are not used under the authority of any Act? No. Many Acts have been passed for that purpose, but they have been all known to fail. If you give them running power over the line you should provide them with water accommodation, station accommodation, and the use of the sidings generally. If you give them power to run without these, you give them a power they cannot use.
28. *By the Chairman*: You think it ought to be a matter of private arrangement? Entirely a matter of private arrangement.
29. *By Mr. Hay*: Do you think it would be advisable, in any case, to allow the engines of private Companies to run on the line? I think it would not be advisable without the consent of the Commissioner.
30. With consent, do you think it would be advisable? That would depend on circumstances. You might give the power to other Companies whose lines would run into yours. For instance, in case the Melbourne line should meet ours, you might find it advisable to give them the power. But there would be a break of gauge, so that they never can come on.
31. *By Mr. Jones*: Supposing a private Company made a Tramway or Railway from Morpeth, and wanted to join on to the Railway line at East Maitland, so as to run on to West Maitland, in that case there would be no difficulty in making a private arrangement with that Company, though you would give them no general power under this Act? No; I would not give any person power to bring an engine on the line without the consent of the Commissioner.
32. *By the Chairman*: What is your next suggestion? The next is at page 61, clause 134. This relates to the same thing. You see it not only provides for engines coming on the line, but directs the Commissioner to give instructions to his Engineer or agent to report as to whether such engine is in a fit state to be used on the Railway; and if the engine be fit to run on the Railway, the Commissioner is compelled to allow it to be run, on payment of the ordinary tolls.
33. *By Mr. Suttor*: Any such locomotive engine must be run by a new Company? Any person might make a private branch tramway.
34. Only by Act of Council? Over his own land he may do it.
35. *By the Chairman*: Do you think any portion of this clause will be necessary in the event of the 114th being struck out—would it not answer if this were made applicable to lessees only? I am of opinion that it is not necessary to insert anything at all in reference to lessees. I do not think it is at all advisable that you should encumber the Bill with provisions for which you may not have any use. If you require to give leases you can have them entered into in terms as binding as you think proper; but here I do not think you should go into details of this kind. My objection has reference to the whole of the clauses from clause 134 to clause 144.
36. In your opinion the whole of these are unnecessary? I do think so.
37. They all have reference to the use of the Railway by the owners of engines and carriages not belonging to the Government? Yes.
38. And all that legislation you would leave out? I would.
39. *By Mr. Hay*: Would the provisions embodied in these clauses be such as you would approve of if inserted in a lease of the Railway? I did not look at them with the view of giving an answer to that question. But in drawing up a lease, I would do so without reference to this Act at all. I think these clauses are perfectly useless for the purpose of leasing. It is not at all necessary to have an Act of Parliament to lease your line. The 132nd clause provides for all you require as a general authority to lease the line.
40. *By the Chairman*: You are aware that it has been decided in England that a Company has no power to lease, unless that power be expressly conferred by Legislative enactment? I should not contemplate leasing the line absolutely to any person. All the leasing I should contemplate would be the working of the traffic—that is, to arrange for a certain mileage for the engines and carriages. By such an arrangement you would pay a certain toll for passengers, and a certain toll for goods, to any person who would work your Railway, and keep the Railway entirely in your own hands, paying for the engine power and the use of the rolling stock on the line.
41. Then you would not contemplate the Government leasing the line in the sense in which the word is ordinarily applied—that is, leasing the whole of the works? I should not.
42. The Government should keep the line itself in their own hands? Decidedly, and only lease in fact what is called the working.
43. Do you understand the arrangement which the Railway Commissioners made with Mr. Randle for a short time? I do.
44. Is that the kind of arrangement to which you object? I should object to that.
45. Have you seen the contract? I have.
46. And you express this opinion after having considered that document? Yes, after having read it through. It is never satisfactory to the parties owning the stock to lease it with

- with the Railway, because the interest of the man working the Railway is to have as much work as possible out of your plant, expending the smallest possible amount in repairs. Of course when he is leaving the line it is his duty to put the engines and carriages in as perfect a state as he found them in, but I believe that is never done.
47. *By Mr. Jones*: Allowing for fair wear and tear? You cannot allow for that, because if the engines and carriages were properly kept up, they would always be as good as new.
48. Do they never wear out? Never, if properly attended to. The moment you find a weak point you make it good.
49. *By the Chairman*: You may make covenants in the lease to keep the stock in repair? The covenants are never carried out.
50. There are no means practically of compelling them to be carried out? Excepting by arbitration.
51. The plant becomes damaged in the hands of any but the owners? Yes, and the permanent way becomes damaged as well as the engines and carriages. When the question arises as to whether they are in a good state of repair, the only recourse is to go to arbitration.
52. Still you think the Government might relieve themselves from the actual details by an arrangement which may to a certain extent be considered a leasing? I would not advise it; and if you did it at all, I should advise that you lease it in such a way that the party coming on to the line should purchase his own stock.
53. *By Mr. Jones*: Or buy from the Government what they held at the time? Yes, at a fair valuation.
54. Do I understand you that you object altogether to leasing the line? I object to it because I am quite satisfied that no private person can work a line of Railway cheaper than a company or the Government, and it never can be advantageous to a company or to the Government to lease their line.
55. *By Mr. Flood*: You stated a little since that you would only recommend the leasing of what is called the working of the line? I think I did not say I would recommend that; I merely said I should look on this arrangement in that light, and not as a leasing to any person to take possession of the whole line, but merely leasing the working of the traffic—that is to say, that the lessee should work your goods traffic at so much per mile, and your passenger traffic at so much per mile, finding engines and carriages and all other necessary appliances, and that you should find him certain accommodation, such as stations, water, and so on.
56. Who would keep the permanent way in repair? That would be a matter of arrangement. But I should strongly object to leasing at all, under any circumstances.
57. *By Mr. Hay*: We are under very different circumstances here from those under which they let lines of Railway in England; there, small companies having no rolling stock usually let their lines to large ones who have, but here, the Government would be in possession of the rolling stock, and would be letting the Railway to parties not supposed to have rolling stock? In some cases in England lines are let to parties who have no rolling stock, but who purchase it from the owners of the line.
58. But the terms you mention apply only to persons having a quantity of rolling stock? Yes. A person might offer to you to work your Railway at a certain mileage rate, and he might buy the plant, or offer to take a certain interest in the plant, the mileage rate depending on the arrangement to be made in this respect.
59. Could it not be done by letting him have the plant to work the line? It could be done, but it would be ruinous to the plant as well as the permanent way. I would never recommend it.
60. Could not the Chief Engineer of the Government Railways be made the judge as to whether the engines and permanent way, and everything handed over to the lessees, were kept in proper order, and delivered back in the same condition in which they were received? That is the difficulty. You may report upon it, but how are you to compel the lessee to put them in repair. You may order the lessee to do so, but he says, "No, they are in good repair already;" and then comes the question whether they are so or not. You are obliged to go to arbitration.
61. Could not the Chief Engineer be made sole arbiter? How is he to enforce his decision?
62. By penalties in the lease, and not only penalties but forfeiture of the lease? I never knew penalties to be carried out, although I have often known them to be inserted.
63. If the lessee became bound by a provision making the Chief Engineer of the Government the sole arbiter on these points, would your objections apply then? I should object entirely to the line being leased to any one.
64. *By Mr. Flood*: If the Engineer were appointed sole arbiter between the lessee and the Government, he might act partially, or he might act in the most arbitrary manner, towards the lessee? He might do so; but, being in that position myself, I should not contemplate anything of the kind if I were appointed to act between the contractor and the Commissioner.
65. You are not aware, perhaps, that the Engineer or Surveyor who superintended the Circular Quay was sole arbiter in that matter? I am aware of it.
66. Are you aware whether that officer acted partially towards the contractor? I do not know at all.
67. *By Mr. Hay*: Have you turned your attention to the peculiarity of our Railways in this respect, that the parties entrusted with the working of them are not interested in the amount of profit to be derived? I should assume that any person paid to discharge a duty would be interested in the profits of the line.
68. Do you think it likely that a person paid by the Government would, in effect, be animated by the same desire to make the most profit out of the line, in the same way as if he was one of a company who received the whole profits of the line? I should think so. I should think any man in the world, if paid to discharge a duty, would discharge that duty as efficiently and faithfully as he would if he belonged to a company.
69. Are you aware of any cases in the United Kingdom in which the owners of Railways have

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- have a guarantee of a certain per centage upon the working of their line, in Ireland for instance? I do not remember; I think all the Irish companies work their own lines.
70. In some cases do not the counties give a guarantee? In Ireland they do.
71. Of a certain per centage? Yes.
72. What is the effect of that? I think the effect is to make the companies neglect to work the line in the same efficient manner as they would do without the guarantee.
73. Do you know of any cases in which a much larger per centage could be made if it were not for that guarantee? I do not know any of any of my own personal knowledge; but I know it was the talk in Ireland that the Midland Great Western Company do not work the line between Athlone and Galway in the same manner as they would do without a guarantee.
74. They are insured a certain per centage—five per cent., is it not? I think it is five per cent.
75. In this case you believe that the assurance of that per centage makes them careless about making the most of the line? I think so; but of course, that will not refer to private individuals paid to discharge a duty. It has not the same bearing on the question.
76. You do not, in effect, then think that under proper management as a Government Department, less would be made out of a Railway than if it were worked by a company for its own profit? I do not; I think that if proper officers are appointed to discharge the several duties, those officers would discharge those duties quite as efficiently and quite as faithfully as if employed by any private company. I can only say if they did not, and if they belonged to me, I should very soon change them. The only difference that I can see between companies and Governments is, that companies always select the man most capable of performing a certain duty and pay him well, and I do not think it is generally, or always, the case with Governments.
77. *By the Chairman*: Will you have the kindness to make your next suggestion? The next one is at page 65, line 20, clause 147, as to the law of trespass. It says,—“if any person shall wilfully trespass upon any such Railway, or any of the stations, or other works, or premises connected therewith, and shall refuse to quit the same, upon request to him made by any officer or agent of the Commissioner, every such person so offending and all others aiding or assisting therein, shall forfeit a sum not exceeding ten pounds for every such offence.” My objection is to these words, “and shall refuse to quit the same upon request to him made by any officer or agent of the Commissioner.” If they be retained, a man may travel or walk on the line as long as he likes, provided he leaves the line when he is ordered to do so. If he walks off you cannot fine him for the trespass, and the moment he has gone off he can come on again and again. I think if in one instance you were to fine a man simply for coming on the line at all, you would have but few instances of trespass afterwards; but I think if they find they can evade it by walking off when ordered to do so they will become very troublesome.
78. *By Mr. Hay*: You propose to omit these words? Yes. That is the last suggestion I think I have to make.
79. *By the Chairman*: Are these all the suggestions that occur to you in reading this Bill? They are.
80. You have read through the Governor General's Message, No. 11, of the 4th December last? I have.
81. Will you favour the Committee with any suggestions that occur to you, from your experience, in reference to the general views laid down by His Excellency as to the extension of Railways? I would rather answer any questions you may put, than give a general opinion on a document of this kind.
82. What is your opinion, then, with reference to the Governor General's first suggestion, that arrangements should be made for executing large contracts instead of small ones, embracing small portions of eight or ten miles as at present? I certainly think that would be very advisable, and I have no doubt you would have the works much more expeditiously done, and done for less money, than at present.
83. Perhaps you have hardly been long enough in the Colony to judge how far the circumstances of the Colony are favourable to large contracts, or would you contemplate the employment of any means by which large contractors or capitalists in England would be induced to take such contracts? I have no doubt they might be induced to do so, if they had offered to them one or two hundred miles of Railway.
84. In fact that course must be pursued, if we determine to make large lines of Railway? Yes.
85. How would you recommend that the affair should be managed? I would recommend that the Government should decide on making Railways to any places they think proper, have the plans and estimates got up, and when they were prepared to let the contracts, they should take them to the English market, where they would get the large contractors to compete. You would then know the exact cost, and get the line completed by a certain time. The contractors would bring out with them skilled labor, and all the plant necessary for the works. I think that would be far better than letting the lines, as at present, in short contracts.
86. Would you suggest that all operations should be suspended, and the whole strength of the Colony be applied to make surveys, and plans, and sections, with a view to entering into large contracts? I would not say suspended, for there are some short lengths which you might go on with at present, such as the line from East Maitland to West Maitland, and from Liverpool to Menangle. But during the time it would take to execute these small contracts, I would prepare the plans and sections for the more important lines throughout the Colony.
87. *By Mr. Jones*: Would there be any difficulty in ascertaining beforehand what the cost of a given line would be, say a line from Campbelltown to Goulburn, or from Maitland to Murrurundi, or a line from Parramatta to Bathurst, or any portion of the country this side of Bathurst? I do not see any difficulty, except as to the price of labor. If any sudden increase

increase should take place in the price of labor, of course it would increase considerably the cost of the works. I believe some time ago wages here rose suddenly from three shillings to nine or ten shillings a day.

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88. You allude to the rise occasioned by the discovery of gold? I do.

89. That is an exceptional case? It might occur again.

90. *By Mr. Suttor*: Are you aware of the description of country between Campbelltown and Goulburn, or Penrith and Bathurst? I am not; I have only been a little beyond Campbelltown, not quite to Menangle.

91. *By Mr. Jones*: Would there be any element of uncertainty, excepting the price of labor? I do not see any, except what could be provided for. You must get information of the facilities of the country for making a line of Railway, and as to the means of procuring timber and stone, and all other particulars.

92. You would, as Engineer, feel yourself bound to arrive at that knowledge? Decidedly.

93. So as to be able to make a computation of the cost of the Railway? Yes.

94. Making allowance for any variation in the price of labor? No, I could not say that. You could not expect a contractor to execute his works at a fixed price, if labor were to vary in price to any great degree.

95. What arrangement would you suggest to meet that case? I would suggest that you should have a sliding scale, so as to pay the contractor according to the price of labor at the time. There should be a certain amount agreed upon when labor was at a certain rate; but, if wages increased beyond that amount, he should be paid a certain rate in addition.

96. *By Mr. Suttor*: Would you not rather take the rate of wages in England as a basis of the contract, seeing that the labor would be imported? No; because if the contractor were to bring out ten thousand men, he could not keep them at so low a rate of wages. If you take men from a country where the average rate of wages is three shillings a day, and bring them to one where the average is nine shillings, you cannot expect those men to stay with you at the lower rate.

97. *By Mr. Jones*: Would you consider it proper to commence any section of a line of Railway without having ascertained beforehand what the actual cost would be—would you think it a proper arrangement to enter on works until you had determined all the preliminaries? I should not do it myself.

98. You think it a necessary condition that proper surveys should be made, and proper estimates framed, to enable the Engineer to decide what the cost could be? Unquestionably.

99. So that if the rate of labor were to remain the same, or nearly the same, you could arrive at an estimate, within a moderate amount, of what the actual cost would be? Exactly so.

100. Then you do not think it would be a business like course to enter on any work until you had determined these particulars? Certainly not.

101. *By Mr. Suttor*: In the event of tramways being carried out in this Colony, would you advise that the management of such roads should be under this Commissioner, and be regulated by this Act, or would you have a separate Act altogether? I really do not contemplate tramways being constructed here.

102. In the event of such roads being constructed, would you recommend that provision should be made in this Bill for regulating the working of them under the management of the sole Commissioner, or would you have them under a separate establishment altogether? If made by the Government, I should think they would be under the sole Commissioner.

103. This Bill does not provide for that? It does not.

104. *By the Chairman*: Do you think it would be possible to make a party in England sufficiently acquainted with the character of the particular works of any particular lines, and, with the circumstances of the Colony, so as to put him in a position to enter into a contract in England, advantageous to the Colony? I think you could, by sending those home whom the contractors know, and in whose statements they could place some confidence; but if you send home a person who is not known, I do not think you would get a single contractor to look at the work.

105. Then you think it would be necessary to send home a confidential person, who would be able to treat with them on the spot, and give them any information they might desire? Yes.

106. Are the Committee to understand that it is your opinion that if the Government determined to carry on Railways to any great extent, it will be necessary to go to the English market for contractors? That is my opinion.

107. You would not recommend the Government to go on contracting for short lines, as at present? I would not.

108. Are you at all acquainted with the state in which the surveys are at present? No; I have not seen any surveys, except the surveys of the present lines and the extensions to Campbelltown and to West Maitland. Of the other lines I have seen a few sections, but I am not prepared to say in what state they are. There is nothing upon which works could be commenced.

109. They are mere trial surveys? More trial surveys than anything else, and trial levels.

110. *By Mr. Suttor*: Your answer has reference to permanent Railways? Yes.

111. Not to tramways? Not to tramways.

112. *By the Chairman*: Have you at all considered the question whether, on any of the lines alluded to in His Excellency's Message, it might be desirable to alter the character of the Railway into something which might, for a time at all events, be worked by horse power? I do not know the country at all, and I am not prepared to say what the traffic would be; but I would not recommend any line to be made to be worked by horse power. The only difference between a locomotive and a horse line would be the difference in the cost of the permanent way; because I imagine that any gradient which is bad for locomotives will be bad for horses also. You must take into consideration the immense amount of horse labor you would have to employ to execute the same amount of work you would get done by a locomotive



J. Whitton, Esq. locomotive engine. I think it would not be by any means a saving, but a great additional expense.

113. You will see that the Governor estimates the expense of making these lines at £4,000 a mile, when, as a matter of fact up to this time, the cost of Railways has been at least three times that amount; do you think it possible there could be a line of road of the character His Excellency describes made at so great a reduction below the class of road called a railroad? Before I answer that question, I must know what description of country has to be passed through, and what kind of gradients are intended to be worked. I understand from His Excellency's Message, that he intends that the rails should be laid on the present roads.

114. *By Mr. Martin*: Is it possible to offer any reliable opinion without some knowledge of the localities through which the different lines will pass? I should never attempt to do so.

115. Take the case of a line of country tolerably clear, and in which there was not much rock, and of another country thickly wooded, close up to each side of the road, with every now and then large boulders of sandstone rock or ironstone gravel—would not the cost of making such a tramway as the Governor speaks of in the latter, be much more expensive than in the former case? It depends in a great measure upon the gradients you intend to use.

116. Leaving gradients out of the question, or assuming the gradients to be the same in both cases, could you offer any opinion unless you knew the character of the line, whether it was soft soil or hard rock, or whether it was a wooded country or an open one? Certainly not. I should never attempt to give an estimate without having plans and sections made, and knowing exactly what kind of country the line was going through, whether through soft sand or hard rock, and so on. There might be a number of bridges that were never contemplated. If you say, from a general knowledge of the country, that a line may be carried through it for a certain amount per mile, it is just possible you may have on one mile a number of bridges which would cost all the money.

117. *By the Chairman*: Apart from the cost of construction, you are clearly of opinion that the cost of working a line by horse power would be greater than by steam? Very much greater; there would be no comparison.

118. Have you been at all in the interior since your arrival? Not further than Maitland in that direction, and as far as Campbelltown, nearly to Menangle in fact. I did not see anything there that would be at all expensive.

119. Do you think it probable that the line between Liverpool and Campbelltown will be made at less cost than that between Parramatta and Liverpool? I do not know. Between Parramatta and Liverpool you have got double way works and a single line. All the works are for a double way.

120. You do not propose to continue that beyond Liverpool? No, excepting in the case of viaducts. Where we have to make viaducts, it will be cheaper to construct them for a double line than to make them single and put on the extra width afterwards; because if they are only made for a single line we are obliged to extend the width of the foundations so much as to go a long way towards making a double line.

121. And besides, in the event of its afterwards being found necessary to lay down a double line, the stoppage of the traffic would be avoided? Yes. However, only in the case of very high viaducts, I would make them double; the smaller ones I would make single.

122. Have you at all thought on the subject of employing wood for rails? I never would do that. On a permanent way, to be worked by engines, it would be found to be very expensive and dangerous. If you use wooden rails at all, you must cover them with iron.

123. Shoe them? Yes.

124. That would be more expensive than iron itself? The labor would; besides which you never could keep them in proper order.

125. *By Mr. Hay*: The wood would be liable to warp? It would warp very much indeed. If would never be safe to work such a line at a high speed. I think the cheapest way is to put down a good permanent way at once; but I would neither erect expensive stations, nor expensive works of any kind. Beyond the permanent way, I would make all the works as plain as they could possibly be made, so long as they were sufficient to carry the traffic.

126. *By the Chairman*: What is your opinion of the present rolling stock of the Sydney line; do you think it unnecessarily expensive? I think the carriages are as good as any I ever saw, but I do not know the price of them. The engines I certainly object to, as being much too large for the purpose intended. They entail additional expense in working, owing to the large consumption of fuel, and they increase the cost of the permanent way, damaging it and themselves by taking an immense dead weight which is not required.

127. What sort of engines would you recommend? Tank engines on six wheels, carrying their supply of water on the same wheels.

128. And dispensing with the tender? Dispensing with the tender. Here you have tenders containing two thousand gallons of water on six wheels, in addition to which you have engines capable of taking thirty-five carriages, while I dare say they never have to take more than six or seven carriages. They increase the cost of maintaining the permanent way, which I am sorry to say is a very imperfect one—the worst description you could have had. I allude to Barlow's patent.

129. It is no longer intended to use that rail, I understand? No; in all cases where it has been used it is being pulled up. Others have used it, because they had no experience of it, in the same way as you have done here.

130. Do you think it would be desirable to take it up here? No, I do not think that, because it would be very expensive to do so; but I have little doubt that in a very few years it will take itself up. The rails are bad iron from what I have seen of them. I have seen several of them in the yard laminated very considerably; and those rails, if they had been good rails, ought to have lasted a considerable number of years. I would not buy rails of the same kind to replace the ones taken up; I would renew them all with a different description of rail.

131. You do not mean to apply your remarks as to the defective state of the permanent way to the works or bridges? No; the rail is the only objectionable feature, so far as I have seen. I have not been over the line yet, but I intend to walk over the whole of it as soon as I can find time. So far as I have seen of the bridges, I find no fault whatever with them.
132. *By Mr. Martin:* Do you think any of the bridges are too expensive. Take a couple of skew bridges near Newtown? One close to the station is the only skew bridge I have seen. There might have been many difficulties to contend with, which would account for their being apparently expensive; and I am not prepared to give an opinion without knowing the circumstances.
133. Does it frequently happen that skew bridges tumble down a short time after they have been erected? It is not generally the case, but they do tumble occasionally.
134. Did you ever know a skew bridge to tumble down twice? I cannot say that I have. There may have been peculiar circumstances which would account for that; but unless I felt pretty confident I could put it up sufficiently strong the first time, I would not begin with it.
135. *By the Chairman:* Do you think it advisable to continue running these heavy engines? I think it would be advisable to stop them if you had smaller engines.
136. Then you think it would be desirable to get out smaller engines? I do; the only use of these engines would be if you had a long line, to send on what are called fast goods, that is goods trains travelling at a high rate of speed, in order to keep the line clear for the passenger traffic. These engines would do for that purpose. They would of course take a heavy goods train at a great speed. They are capable of going sixty miles an hour.
137. Does it occur to you to make any suggestions with regard to the Governor General's Message, in reference to any other matter? It does not.
138. You have no knowledge of the state in which the surveys are? I have not.
139. Under whose directions are these surveys being carried out? I think they are being carried out in a very objectionable manner, so far as the Railway is concerned. I think decidedly that they should be under the charge of the Engineer of Railways. I do not see what the Surveyor General can have to do with them. The men employed by him on ordinary surveys would not be the class of men I should employ at all.
140. You have no knowledge of their instructions? Not the least knowledge.
141. They are supposed to be under the Surveyor General's Department? Yes, I believe they are. I believe the Surveyor General has the control of the surveys.
142. You are not in a position to inform the Committee within what period the surveys and plans and sections of any particular length of line could be in such a state as to enable the Government to send them home? If I knew the length of line it was intended to get up, I could easily state the time that would be required to prepare the plans.
143. You would require to go over it? I would require to go over it, to see the country.
144. There are about twelve surveyors in the field at present—are there not? I have not the slightest idea.
145. Have you had any access to documents on which the estimates have been prepared for the short lines spoken of in the Governor's Message, from Liverpool to Campbelltown, and from Parramatta to Penrith and Windsor? No, I have not.

J. Whitton,  
Esq.

16 Jan., 1857.



1857.

NEW SOUTH WALES.

Legislative Assembly.

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“SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL.”

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# THIRD PROGRESS REPORT

FROM

THE SELECT COMMITTEE

ON THE

“SOLE COMMISSIONER OF RAILWAYS  
INCORPORATION BILL,”

WITH REFERENCE TO

RAILWAY EXTENSION.

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ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

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1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

13. Sole Commissioner of Railways Incorporation Bill:—Mr. Manning moved, That this Bill be now read a second time;—  
Whereupon Mr. Cowper moved, pursuant to amended contingent notice,—That the Question be amended by the omission of all the words following the word “That” at the commencement, with a view to the insertion in their place of the words, “this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers.”  
“(2) That such Committee consist of Mr. Barker, Mr. R. Campbell, Mr. Flood, Mr. Hay, Mr. Martin, Mr. Murray, Mr. Oxley, Mr. Scott, Mr. Suttor, and the Mover.”  
Debate ensued.  
Question—That the words proposed to be omitted stand part of the Question—put and negatived;—  
And Mr. Hay having required that the proposed Committee be appointed by Ballot,—  
Question—That the words, “this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers,” be inserted in place of the words omitted—put and passed.  
Question—That this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and Report upon the present state of the Railway Department, with power to send for persons and papers—put and passed;—  
Whereupon the House proceeded to the Ballot, and the Speaker declared the following Members, being inclusive of the Mover of the Committee and of the Member in charge of the Bill, to be the Committee duly appointed, viz.:—Mr. Cowper, Mr. Hay, Mr. Flood, Mr. Murray, Mr. Oxley, Mr. Jones, Mr. Barker, Mr. Martin, Mr. Macarthur, and Mr. Suttor.

VOTES No. 56. TUESDAY, 9 DECEMBER, 1856.

14. Railways:—Mr. Faucett, on behalf of Mr. George Macleay, moved, pursuant to notice standing in the name of Mr. George Macleay seventh on the Notice Paper for to-day, That the Petition from Mr. Stephen Hale Marsh, presented by Mr. George Macleay on the 25th of September, be referred to the Select Committee now sitting on the Bill for incorporating the Sole Commissioner of Railways.  
Question put and passed.  
15. Mr. Henry Harvey Read:—Mr. Parkes moved, pursuant to notice, That the Petition of Mr. Henry Harvey Read, presented by him on the 8th of August, be referred for consideration to the Select Committee now sitting on the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 56. WEDNESDAY, 10 DECEMBER, 1856.

33. Railway Extension:—Mr. Hay moved, pursuant to notice, That His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony, be referred to the Select Committee for whose consideration and report was referred the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 63. SATURDAY, 20 DECEMBER, 1856.

30. Desecration of the Sabbath:—Mr. Gordon moved, pursuant to notice,—  
(1.) That the Petition presented by him on the 18th instant, praying the House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.  
(2.) Mr. Gordon moved, pursuant to notice, That the Petitions presented by him on the 17th instant, from the Rev. Dr. M'Kay, and certain Members of his Congregation in Sydney, and from the Rev. William M'Intyre, and the Members of his Congregation in Maitland, praying this House to put a stop to the Desecration of the Sabbath by running of Railway Trains, &c., be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.

VOTES No. 66. SATURDAY, 3 JANUARY, 1857.

13. Desecration of the Sabbath :—

(1.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 12th December last, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed and referred accordingly.

(2.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 31st December last, from the Free Church Congregations at Shell Harbour and Terry's Meadows, praying the abolition of Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 67. TUESDAY, 6 JANUARY, 1857.

12. Desecration of the Sabbath :—

(1.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition, ordered by this House to be printed, on the 18th November, 1856, from the Rev. James Cameron, Moderator of the Synod of Eastern Australia, against Sabbath desecration; and the Petition on the same subject, ordered to be printed on the 17th December, 1856, from the Rev. Alexander Macintyre and the Congregation assembling at Ahalton, in the County of Durham, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

(2.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition of the Free Presbyterian Congregation of Shoalhaven, presented by Mr. Gordon on the 30th December last, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 74. WEDNESDAY, 21 JANUARY, 1857.

13. Desecration of the Sabbath :—Mr. Parker moved, pursuant to notice, That the Petition of certain Members of the Church of Scotland, resident in and near Parramatta, against the desecration of the Sabbath by the running of Railway Trains, presented by him on the 13th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

16. Desecration of the Sabbath :—Mr. Oakes moved, pursuant to notice, That the Petition of certain Members of the Wesleyan Congregations in the Town and District of Parramatta, against the Desecration of the Sabbath by the running of Railway Trains, presented by him on the 15th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

VOTES No. 77. FRIDAY, 23 JANUARY, 1857.

20. Desecration of the Sabbath :—Mr. Piddington moved, pursuant to notice, That the Petition of certain Inhabitants of Singleton against the Running of Railway Trains upon the Sabbath, presented by him on 9th December, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

VOTES No. 79. WEDNESDAY, 28 JANUARY, 1857.

13. Desecration of the Sabbath :—Mr. Parker moved, pursuant to notice, That the Petition presented by him yesterday, from the Minister, Churchwardens, and Members of the Congregation of Saint John's Church, at Parramatta, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

14. Desecration of the Sabbath :—Mr. Cowper moved, pursuant to *amended* notice, That the Petition presented by him on the 29th ultimo, from certain Inhabitants of the City of Sydney, and of its Suburbs, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.
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## VOTES No. 85. FRIDAY, 6 FEBRUARY, 1857.

8. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice, That the Petition presented by him on the 3rd instant, from the Presbyterian Congregation worshipping in Macquarie-street, praying this House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.
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## VOTES No. 94. WEDNESDAY, 25 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to certain Petitions referred for their consideration and report.  
Ordered to be printed.
- 

## VOTES No. 96. FRIDAY, 27 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—  
(1.) Mr. Cowper, as Chairman, brought up a Second Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 19th November last, together with the said Bill as amended by the Committee.  
Ordered to be printed.  
(2.) Mr. Hay then moved, That the second reading of this Bill stand an Order of the Day for Wednesday next.  
Question put and passed.
- 

## VOTES 98. WEDNESDAY, 4 MARCH, 1857.

10. Mr. William Henry Whyte :—Mr. Flood moved, pursuant to *amended* notice,—That the Petition presented by him, yesterday, from Mr. William Henry Whyte, praying the adoption of measures to protect his interests, and the public safety, in the matter of a portion of his land, known as Wickham Paddock, which abuts upon the Maitland Road, which has been taken for Railway purposes by the Commissioners of Railways, be referred to the Select Committee on Railways.  
Question put and passed.
- 

## VOTES No. 100. FRIDAY, 6 MARCH, 1857.

1. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Third Progress Report from the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to the Message of His Excellency the Governor General, No. 11, which was referred to that Committee on the 10th December last.  
Ordered to be printed.
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1857.

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL."

## THIRD PROGRESS REPORT,

WITH REFERENCE TO RAILWAY EXTENSION.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 19th November, 1856, the "*Sole Commissioner of Railways Incorporation Bill*," with instructions "*to inquire into and report upon the present state of the Railway Department, with power to send for Persons and Papers*," and to whom were further referred, on the 9th December last, Two *Petitions*, from Mr. Stephen Hale Marsh and Mr. Henry Harvey Read respectively, on the 10th of the same month "*His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony*," and subsequently from time to time various *Petitions praying the House to put a stop to Railway Traffic on the Sabbath*, and who on the 25th ultimo brought up a *Progress Report* in reference to the said *Petitions*, and on the 27th ultimo a *Second Progress Report*, together with the *Bill, as amended*, and to whom also was referred, on the 4th instant, the *Petition of Mr. William Henry Whyte*,—have agreed to the following Third Progress Report:—

In considering the Message of His Excellency the Governor General, No. 11, which was referred by your Honorable House for the Report of Your Committee, it was deemed advisable to obtain as much information as possible respecting the proposed extension of the Lines from Liverpool to Campbelltown, and for eight miles beyond West Maitland towards Singleton. Your Committee, therefore, requested the attendance of Mr. Mann, the Chief Commissioner of Railways, and Mr. Whitton, the Engineer-in-Chief. The former gentleman produced a detailed Estimate, according to which it was proposed that the whole of the £400,000 inserted in the General Estimates to be raised by Loan for the construction of Railways should be expended: but it was found in the course of the inquiry that the full amount would not be immediately required. An amended Estimate was therefore prepared, and being concurred in by your Committee, will be submitted for the consideration of your Honorable House.

The amount now proposed will, it is believed, be ample to enable the Government to proceed with those Works, the Surveys for which are now in such a state of forwardness, that they may be contracted for at once. The Surveys and Estimates of the Line from Liverpool to Campbelltown are certified to be in this state, but it appears that the Surveys for the Line beyond West Maitland are not sufficiently advanced to enable your Committee to express any opinion respecting them; and your Committee do not feel that the Assembly ought to be called upon to vote Funds for the construction of Railways until the Plans and Estimates have been completed, and the propable cost can be computed with some degree of accuracy. On this ground they also feel that they cannot, in the present state of the Surveys, recommend that any appropriation should be made for the continuation of the Western Line beyond Parramatta towards the Nepean, or the Hawkesbury.

Your Committee recommend that the Surveys of the Northern Line from West Maitland towards Singleton, and of the Western Line from Parramatta towards the Nepean or the Hawkesbury, should be pressed on with the greatest possible despatch, so that, upon the assembling of Parliament, the Estimates for their construction may be at once taken into consideration. In order that the Southern Line may be also carried on without any unnecessary delay to the junction of the Railway with the Main Road, at or near West Bargo, your Committee recommend that the Surveys of that Line should also be proceeded with as speedily as possible.



Your Committee are of opinion that the actual construction of Railways will be hastened, instead of being impeded, by the recommendation which they now make, viz. :— that instead of your Honorable House voting the sums of £15,000 for Rails, and of £92,000, as originally suggested, for the Extension of the Line beyond West Maitland, towards Singleton, that a sum of money should be voted to be remitted to England for the purchase of Rails for the Northern and Western Lines, and also for the extension of the Southern Line to the junction of the Railway in that direction with the South Road.

The length of these lines may be estimated at  $53\frac{1}{2}$  miles, the rails for which, at £2,000 per mile, will cost £107,000. The total amount of the amended Estimate is £300,000, and the general heads of expenditure are as follows :—

Campbelltown Extension, 12 miles, at £11,500 per mile .....	138,000	0	0
Sydney Terminus (Store) ... ..	1,500	0	0
Incidental Works at Sydney... ..	5,000	0	0
Materials, spare fittings, tire iron, &c., &c. ... ..	5,000	0	0
2 Tank Engines ... ..	4,500	0	0
2 Composite Carriages ... ..	1,000	0	0
9 Horse-boxes ... ..	1,800	0	0
6 Carriage Trucks ... ..	700	0	0
	8,000	0	0
Rails, &c, for extensions,—say $53\frac{1}{2}$ miles ... ..	107,000	0	0
Establishment ... ..	11,000	0	0
	275,500	0	0
Compensation for Land and other Contingencies ... ..	24,500	0	0
TOTAL ... ..	£300,000	0	0

*Legislative Assembly Chamber,  
Sydney, 6 March, 1857.*

CHARLES COWPER,  
*Chairman.*

1857.

NEW SOUTH WALES.

Legislative Assembly.

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL."

## FOURTH PROGRESS REPORT

FROM

THE SELECT COMMITTEE

ON

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"

WITH REFERENCE TO THE

PETITION OF MR. WILLIAM HENRY WHYTE;

TOGETHER WITH

THE MINUTES OF EVIDENCE

AND

APPENDIX.

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ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED

13 March, 1857.

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Sydney :

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

13. Sole Commissioner of Railways Incorporation Bill:—Mr. Manning moved, That this Bill be now read a second time;—  
Whereupon Mr. Cowper moved, pursuant to *amended contingent* notice,—That the Question be amended by the omission of all the words following the word "That" at the commencement, with a view to the insertion in their place of the words, "this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers."  
" (2) That such Committee consist of Mr. Barker, Mr. R. Campbell, Mr. Flood, Mr. Hay, Mr. Martin, Mr. Murray, Mr. Oxley, Mr. Scott, Mr. Suttor, and the Mover."  
Debate ensued.  
Question—That the words proposed to be omitted stand part of the Question—put and negatived;—  
And Mr. Hay having required that the proposed Committee be appointed by Ballot,—  
Question—That the words, "this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers," be inserted in place of the words omitted—put and passed.  
Question—That this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and Report upon the present state of the Railway Department, with power to send for persons and papers—put and passed;—  
Whereupon the House proceeded to the Ballot, and the Speaker declared the following Members, being inclusive of the Mover of the Committee and of the Member in charge of the Bill, to be the Committee duly appointed, viz. :—Mr. Cowper, Mr. Hay, Mr. Flood, Mr. Murray, Mr. Oxley, Mr. Jones, Mr. Barker, Mr. Martin, Mr. Macarthur, and Mr. Suttor.

VOTES No. 56. TUESDAY, 9 DECEMBER, 1856.

14. Railways :—Mr. Faucett, on behalf of Mr. George Macleay, moved, pursuant to notice standing in the name of Mr. George Macleay seventh on the Notice Paper for to-day, That the Petition from Mr. Stephen Hale Marsh, presented by Mr. George Macleay on the 25th of September, be referred to the Select Committee now sitting on the Bill for incorporating the Sole Commissioner of Railways.  
Question put and passed.  
15. Mr. Henry Harvey Read :—Mr. Parkes moved, pursuant to notice, That the Petition of Mr. Henry Harvey Read, presented by him on the 8th of August, be referred for consideration to the Select Committee now sitting on the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 56. WEDNESDAY, 10 DECEMBER, 1856.

33. Railway Extension :—Mr. Hay moved, pursuant to notice, That His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony, be referred to the Select Committee for whose consideration and report was referred the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 63. SATURDAY, 20 DECEMBER, 1856.

30. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice,—  
(1.) That the Petition presented by him on the 18th instant, praying the House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.  
(2.) Mr. Gordon moved, pursuant to notice, That the Petitions presented by him on the 17th instant, from the Rev. Dr. M'Kay, and certain Members of his Congregation in Sydney, and from the Rev. William M'Intyre, and the Members of his Congregation in Maitland, praying this House to put a stop to the Desecration of the Sabbath by running of Railway Trains, &c., be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.

## VOTES No. 66. SATURDAY, 3 JANUARY, 1857.

## 13. Desecration of the Sabbath:—

(1.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 12th December last, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed and referred accordingly.

(2.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 31st December last, from the Free Church Congregations at Shell Harbour and Terry's Meadows, praying the abolition of Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 67. TUESDAY, 6 JANUARY, 1857.

## 12. Desecration of the Sabbath:—

(1.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition, ordered by this House to be printed, on the 18th November, 1856, from the Rev. James Cameron, Moderator of the Synod of Eastern Australia, against Sabbath desecration; and the Petition on the same subject, ordered to be printed on the 17th December, 1856, from the Rev. Alexander Macintyre and the Congregation assembling at Ahalton, in the County of Durham, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

(2.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition of the Free Presbyterian Congregation of Shoalhaven, presented by Mr. Gordon on the 30th December last, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

## VOTES No. 74. WEDNESDAY, 21 JANUARY, 1857.

## 13. Desecration of the Sabbath:—Mr. Parker moved, pursuant to notice, That the Petition of certain Members of the Church of Scotland, resident in and near Parramatta, against the desecration of the Sabbath by the running of Railway Trains, presented by him on the 13th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

## 16. Desecration of the Sabbath:—Mr. Oskes moved, pursuant to notice, That the Petition of certain Members of the Wesleyan Congregations in the Town and District of Parramatta, against the Desecration of the Sabbath by the running of Railway Trains, presented by him on the 15th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

## VOTES No. 77. FRIDAY, 23 JANUARY, 1857.

## 20. Desecration of the Sabbath:—Mr. Piddington moved, pursuant to notice, That the Petition of certain Inhabitants of Singleton against the Running of Railway Trains upon the Sabbath, presented by him on 9th December, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

## VOTES No. 79. WEDNESDAY, 28 JANUARY, 1857.

## 13. Desecration of the Sabbath:—Mr. Parker moved, pursuant to notice; That the Petition presented by him yesterday, from the Minister, Churchwardens, and Members of the Congregation of Saint John's Church, at Parramatta, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

14. Desecration of the Sabbath :—Mr. Cowper moved, pursuant to *amended* notice, That the Petition presented by him on the 29th ultimo, from certain Inhabitants of the City of Sydney, and of its Suburbs, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.

VOTES No. 85. FRIDAY, 6 FEBRUARY, 1857.

8. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice, That the Petition presented by him on the 3rd instant, from the Presbyterian Congregation worshipping in Macquarie-street, praying this House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.

VOTES No. 94. WEDNESDAY, 25 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to certain Petitions referred for their consideration and report.  
Ordered to be printed.

VOTES No. 96. FRIDAY, 27 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—  
(1.) Mr. Cowper, as Chairman, brought up a Second Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 19th November last, together with the said Bill as amended by the Committee.  
Ordered to be printed.  
(2.) Mr. Hay then moved, That the second reading of this Bill stand an Order of the Day for Wednesday next.  
Question put and passed.

VOTES 98. WEDNESDAY, 4 MARCH, 1857.

10. Mr. William Henry Whyte :—Mr. Flood moved, pursuant to *amended* notice,—That the Petition presented by him, yesterday, from Mr. William Henry Whyte, praying the adoption of measures to protect his interests, and the public safety, in the matter of a portion of his land, known as Wickham Paddock, which abuts upon the Maitland Road, which has been taken for Railway purposes by the Commissioners of Railways, be referred to the Select Committee on Railways.  
Question put and passed.

VOTES No. 100. FRIDAY, 6 MARCH, 1857.

1. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Third Progress Report from the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to the Message of His Excellency the Governor General, No. 11, which was referred to that Committee on the 10th December last.  
Ordered to be printed.

VOTES No. 105. FRIDAY, 13 MARCH, 1857.

2. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Fourth Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, in reference to the Petition of Mr. William Henry Whyte, which was referred to that Committee on the 4th instant.  
Ordered to be printed, together with the accompanying Appendix.

1857.

“SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL.”

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## FOURTH PROGRESS REPORT

WITH REFERENCE TO THE

### PETITION OF MR. W. H. WHYTE.

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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 19th November, 1856, the “*Sole Commissioner of Railways Incorporation Bill*,” with instructions “*to inquire into and report upon the present state of the Railway Department, with power to send for Persons and Papers*,” and to whom were further referred, on the 9th December last, Two *Petitions*, from Mr. Stephen Hale Marsh and Mr. Henry Harvey Read respectively, on the 10th of the same month “*His Excellency the Governor General’s Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony*,” and subsequently from time to time various *Petitions* praying the House to put a stop to Railway Traffic on the Sabbath, and to whom also was referred, on the 4th instant, the *Petition of Mr. William Henry Whyte*, and who on the 25th ultimo brought up a *Progress Report* in reference to the said *Petitions*; on the 27th ultimo a *Second Progress Report*, together with the *Bill, as amended*; and, on the 6th instant, a *Third Progress Report*, in reference to *Railway Extension*;—have agreed to the following Fourth Progress Report:—

Your Committee requested Mr. Whyte to appear before them to make a statement of his case; they also examined Mr. Whitton, the Engineer-in-Chief, and Mr. Nealds, the Secretary, to the Railway Commissioners.

The conclusion at which your Committee have arrived from the Evidence taken is, that Mr. Whyte should again bring forward before the Railway Board his claim for the relief prayed for in his *Petition* to your Honorable House, when they have no reason to doubt that justice will be done in the matter.

*Legislative Assembly Chamber,  
Sydney, 13 March, 1857.*

CHARLES COWPER,  
*Chairman.*

## SEPARATE APPENDIX.

	Page.
Petition from Mr. William Henry Whyte, praying the adoption of measures to protect his interests, and the public safety, in the matter of a portion of his land, known as Wickham Paddock, which abuts upon the Maitland Road, and which has been taken for Railway purposes by the Commissioners of Railways.. .. .	5

## LIST OF WITNESSES.

*Thursday, 5 March, 1857.*

J. Whitton, Esq., Engineer-in-Chief to Railway Commissioners.. .. .	1
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*Friday, 6 March, 1857.*

Mr. W. H. Whyte, Petitioner.. .. .	2
C. J. Nealds, Esq., Secretary to the Railway Commissioners .. .. .	4

1857.

NEW SOUTH WALES

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"

WITH REFERENCE TO THE

PETITION OF MR. WILLIAM HENRY WHYTE.

THURSDAY, 5 MARCH, 1857.

Present:—

Mr. BARKER,  
Mr. COWPER,  
Mr. FLOOD,

Mr. SUTTON.

Mr. HAY,  
Mr. JONES,  
Mr. MACARTHUR,

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

John Whitton, Esq., C.E., Engineer-in-Chief of Railways, called in and examined:—

1. *By the Chairman*: Can you give the Committee any information with respect to the Petition of Mr. William Henry Whyte, referred yesterday to this Committee by the House, in reference to the severance of his land on the Newcastle and Maitland line? I was at Newcastle a short time ago, when Mr. Whyte complained of what he called an act of injustice with regard to the severance of some of his property; but after hearing an explanation, I was disposed to think every provision had been made that he could reasonably expect.
2. You are aware that Mr. Whyte considers that the access from his allotments to the Maitland Road, near the Cottage Bridge, is not sufficient, but he wants another access further on towards Maitland? Yes, I understood Mr. Whyte to say that; but I think it very objectionable to give more level crossings than are absolutely necessary. A very good road has been made through Mr. Dangar's land, which it is open to Mr. Whyte to use; but he objects on account of the difficulty of driving his cattle over this crossing, and he asks the Commissioners to give him another crossing in his own field.
3. Entirely through his own land? Yes.
4. And there are objections to that? I think it is very objectionable to have level crossings where they can be avoided.
5. The road you have given at present serves for purposes of access for Mr. Whyte and Mr. Dangar? Yes. I think the damage is done to Mr. Dangar, by giving Mr. Whyte a road through his land.
6. *By Mr. Macarthur*: Do you know whether Mr. Whyte has received any compensation for the injury done to him by the Railway? Mr. Whyte stated he had not, but I think he ought to have compensation.
7. The compensation should include, equitably, the inconvenience he is put to by being deprived of his right of way? Yes. If you take a man's property, or divide that property, he is entitled to compensation of some kind or other; and I would much sooner pay him a moderate compensation for having to go round, than give him a level crossing over the Railway.

J. Whitton,  
Esq.  
5 March, 1857.



- J. Whitton, Esq.  
5 March, 1857.
8. *By Mr. Suttor*: He has to go round about half-a-mile, has he not? The crossing is about a quarter of a mile from his land; it makes half-a-mile going round.
9. *By Mr. Flood*: Are there any houses or inhabitants on the line towards Maitland, opposite Mr. Whyte's property? I cannot speak to that. I think there are one or two houses about here (*pointing to a plan on the table before the Chairman*), but I cannot speak positively.
10. Do you not think it is objectionable to drive cattle in the direction of Newcastle, which will cause Mr. Whyte to travel half-a-mile round, when he might cross with much greater facility, and be less likely to do damage to the public or to pedestrians who may have to travel over that road? There is no doubt that travelling half-a-mile round would inconvenience Mr. Whyte, but level crossings are objectionable, and I would be inclined to give him something like a reasonable compensation for bringing his cattle round, rather than give him another crossing; but if the compensation he requires amounts to any very large sum, it might be better to give him the crossing. There is no difficulty whatever in the way, so far as I remember, so that a crossing would cost a very small sum of money.
11. You are of opinion that the Government would be prepared to meet any reasonable demand Mr. Whyte may make for compensation? I think they ought to be. I would never sever any man's land without giving him compensation.
12. You are aware that cattle in this Colony are generally wild—difficult to drive, and sometimes dangerous to persons on foot? Yes; but I do not know that there would be any difference in that respect over one crossing or the other.
13. *By the Chairman*: Would you have to put a gatekeeper at this crossing if it were given? No. The only inconvenience would be having cattle crossing over at uncertain times.
14. Have you had this matter especially brought under your notice? I have not.
15. *By Mr. Flood*: I suppose it would be difficult to estimate the amount of compensation that Mr. Whyte would be entitled to by being denied this crossing? Yes; and it is probable he would ask very large compensation. Perhaps it would be better to give him the crossing than any compensation, because the compensation that would satisfy him would probably be four or five times as much as would make a level crossing there.
16. *By Mr. Macarthur*: I understood you to say that if he was inclined to take a reasonable amount of compensation, you would rather give it him than increase the number of crossings? I know the cost of crossings, but I do not know the amount of compensation he would require. I do not think a crossing there would cost more than £50.
17. *By Mr. Flood*: Do you think it is fair to ask Mr. Whyte to go half-a-mile round, and to pass through land belonging to another individual, instead of allowing him to cross from his own land? If Mr. Whyte had found no inconvenience from it, I do not see that there would have been any harm done; but if he objects to it, much the shorter plan would be to make him a level crossing.
18. Are you aware of any case analogous to this one along the whole line, where a party has been compelled to go round through other persons' land instead of crossing through his own land? I have not had my attention particularly called to one of the same kind. It is probable an arrangement might be made to do away with this crossing in Mr. Dangar's land, if there is no general accommodation road there; and if that could be done, to make a crossing at the junction of the two properties to suit both parties; but I do not know sufficient of the locality to say positively whether that is practicable or not.

FRIDAY, 6 MARCH, 1857.

Present:—

MR. COWPER,	MR. JONES,
MR. FLOOD,	MR. MACARTHUR,
MR. HAY,	MR. SUTTOR.

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

Mr. William Henry Whyte, called in and examined:—

- Mr. W. H. Whyte.  
6 March, 1857.
1. *By the Chairman*: Your name is William Henry Whyte? Yes.
2. You are the petitioner whose Petition was presented by Mr. Flood to the Assembly? Yes.
3. Will you state to the Committee what course you took to obtain redress for the alleged injury to your property by the Railway Commissioners? I wrote to the Secretary of the Commissioners, and requested the matter might be arbitrated upon. Arbitrators were appointed, and met; but then it appeared the Government had allowed me more land than I wanted; consequently the arbitration was postponed, in order that the matter might be inquired into. Since then I have applied frequently to the Commissioners for a crossing and compensation, and have always been refused.
4. What do you mean by more land than you wanted? They gave me a strip of land from the station, whereas I was only entitled to part of it. We found out this when arbitrating, and in consequence of the mistake the court adjourned the proceedings.
5. But your Petition to the Assembly is to get another road? Yes; at present I am deprived of the right of access to my property.
6. You have access through Mr. Dangar's land? No, that is fenced off there (*pointing to the map*). It only goes through Mr. Fleming's land there.
7. Do you mean to say you have not access to your land through Mr. Dangar's? It is impossible for me to bring cattle round here (*referring to the map*).

8. What you demand is a right of way across the Railway? Yes.
9. Here? (*referring to the map*). Not particularly—any part.
10. But you want it through your own land to the main road? Yes. I cannot bring my stock in this line (*referring to the map*); there are a number of houses along here which prevent you getting your stock along, except with the greatest difficulty. Mr. W. H. Whyte.  
6 March, 1857.
11. *By Mr. Flood*: Houses on both sides of the road? Yes.
12. *By the Chairman*: Have you made your claims to the Commissioners in writing? Yes.
13. Have you a copy of that document? Not here. Mr. Nealds knows all about the transaction.
14. Who was your arbitrator? Mr. Bussell, of Newcastle.
15. Who was arbitrator for the Commissioners? I do not recollect the name of the gentleman they appointed.
16. Under what regulations did the arbitrators meet—was a deed drawn up—did they give a written award? No; in consequence of more ground having been taken by the surveyor than I was entitled to, the proceedings were postponed.
17. *By Mr. Macarthur*: How long ago was this? About twelve or fifteen months.
18. *By Mr. Suttor*: This is the main road from Maitland to Newcastle? (*referring to the map*). Yes.
19. Then all the other parties drive their cattle here? There are no other parties.
20. Then, if you have the monopoly —? I am the nearest.
21. *By the Chairman*: You come from Maitland with your cattle? Yes.
22. And you want to come in here (*referring to the map*), and not pass down between these two lines of houses? Yes. I cannot bring stock along this line (*referring to the map*), as the buildings are erected here close to the river.
23. What do you desire? A crossing on any part of this property.
24. That will satisfy you. Yes.
25. In the event of the Commissioners not giving you this, what next? Compensation for the land taken, and also for the severance.
26. Which land? This the Railway has cut off.
27. Have you not been compensated for this? No; they have taken my property and refused to give me compensation. Unless the crossing is granted me here, I must be under an obligation to my friend, having to go through his land.
28. *By Mr. Macarthur*: When did you last write to the Commissioners? I wrote to Mr. Nealds to know when the arbitration would take place again that was postponed about twelve or fifteen months ago.
29. Was your communication in writing? I spoke to Mr. Nealds, and the answer I got was that the Commissioners could not do more than they had done until fresh arbitrators were appointed.
30. With regard to the meeting of the arbitrators? We met in the Court House at Newcastle, but we were obliged to postpone the proceedings in consequence of their surveyor having given me the whole of this strip of ground (*referring to map*), while I only commence from Mr. Dangar's.
31. *By the Chairman*: What do you value the compensation at, supposing the Commissioners do not give you the crossing? For the land I would take £1,600.
32. That is for the mere land? Yes; not for the severance.
33. What quantity of land? They said four acres twenty-eight perches, but when they came to measure they found there was not so much; and that was the reason of the postponement of the arbitration.
34. Do you know if it was an error on the part of the Government Surveyor? Yes, it was.
35. *By Mr. Hay*: Is there one acre of your ground taken? Yes, nearly two.
36. I see, according to the scale of this map, it is eight and a-half chains long by one and a-half wide? Yes.
37. *By Mr. Suttor*: That is not an acre; there are ten chains to the acre? Four acres and twenty-eight perches was what they allowed me.
38. *By the Chairman*: Who made the mistake? The surveyor.
39. The Railway surveyor? Yes.
40. He appears not to have known where your land ended and the Crown land commenced? Yes.
41. Do I understand you got Crown land in compensation? No, I did not.
42. *By the Chairman*: They did not know your precise boundary? No.
43. *By Mr. Suttor*: How do you propose to prevent your stock running on the line; would you put up gates—otherwise there would be great danger? The gate would be required but very seldom.
44. How could you prevent your stock running up the line? Oh! the gates are generally made to shut across the line. I should put a house, and station a man there.
45. Then you would erect gates yourself? The Government, I should think, would do it.
46. What is the description of the land where you require the crossing? It is nearly level. Mr. Wright said he thought the crossing could be put for £50. I may explain that the proper road comes round this way by the river side, and that it is only by the courtesy of Mr. Dangar that a road is allowed here. The high road is much further round.
47. *By Mr. Flood*: What is the practice pursued by the Railway Commissioners, so far as your knowledge goes, with reference to these parts? I think every other property has had a crossing—more than one in some cases; and even when they have been too narrow they have expressed their readiness to extend them.
48. You are aware that on my property at Hexham the Commissioners made two crossings? Yes.
49. Do you know the distance across my farm from one side to the other? I do not, exactly.

- Mr. W. H. Whyte.  
6 March, 1857.
50. Do you know the distance from the fence on the east side to the swamp? I do.
  51. Do you think it is half a mile? No.
  52. You know there are two crossings? Yes; and I think it is very little over a quarter of a mile.
  53. In driving cattle from the west side of your land to the crossing at Mr. Dangar's, do you not apprehend considerable danger to persons who may have to travel from these parts? I do.
  54. The cattle must all come by the Maitland Road? Yes; and in bringing them that way I am likely to lose several.
  55. How far are you from the boundary? One mile.
  56. Is the population increasing near Mr. Dangar's crossing and Cottage Bridge? Yes.
  57. That is the direction principally where the population can increase? Yes. There is not a road laid down on the Government Chart, but there is a road along the creek.
  58. Does that road which you state passes the creek go out into the Maitland Road? No.
  59. It is a road you could not possibly make use of? No.

Charles John Nealds, Esq., Secretary to the Railway Commissioners, called in and examined:—

- C. J. Nealds, Esq.  
6 March, 1857.
1. *By the Chairman:* You are, I believe, Secretary to the Railway Commissioners? I am.
  2. Will you state to the Committee what you know of the case of Mr. William Henry Whyte, of Newcastle, who had some land taken from him for the passage of the Railway between Newcastle and Maitland; has he made a demand for the injury he has sustained in the manner prescribed by law? He has. Mr. Whyte's name appeared in the Book of Reference, and he was served with a notice by myself personally, stating that there was a certain quantity of land we should require. It appeared we required four acres twenty-eight perches, and Mr. Whyte claimed £400 per acre on the 22nd of November, 1854. It stood over for a considerable time. At length when the Commissioners went to Newcastle to settle these outstanding claims, Mr. Whyte named an arbitrator on his behalf—
  3. That is to say, the Commissioners demurred, and then the matter went to arbitration as prescribed by the Act? Yes. Mr. Whyte nominated his arbitrator—
  4. Who was it? Dr. Brooks, I think, was the arbitrator.
  5. Mr. Whyte says Mr. Bussell? He was the umpire. Dr. Brooks was Mr. Whyte's arbitrator, I think.
  6. Who was the arbitrator for the Government? Mr. E. C. Merewether. The case came on at the Court House at Newcastle, which was given up for the service of the Commissioners, and it was then found notice had been given for four acres twenty-eight perches, whereas only about one-third of that quantity was taken from Mr. Whyte.
  7. Your surveyor thought more land belonged to Mr. Whyte than did belong to him? The surveyor imagined that all this (*referring to the map*) belonged to Mr. Whyte, whereas it was only this piece (*referring to the map*).
  8. Just a small portion of it? Just a small portion of it.
  9. You were not able to obtain accurate information as to the proprietors of the land? No.
  10. What is the actual amount of land taken from Mr. Whyte? Not, I think, above an acre and a quarter.
  11. What form does this arbitration assume, was there a form of agreement and a day fixed for the award? Yes.
  12. Will you state the proceedings which took place? The arbitrators met in the Court, and Mr. Whyte appeared as a witness. We found, however, that such a mistake had been made in the quantity of the land that we could not go on. Mr. Whyte would not abate his claim—would not take compensation at so much an acre—but wished to be compensated for the whole, although we had only taken a small piece of the ground.
  13. Was any proposal made to him in consequence? No.
  14. The matter has dropped then? The matter has dropped.
  15. *By Mr. Jones:* Did not the arbitrators give a decision on the amount of money to be given for the land to be taken? No. It was proposed to adjudicate on the case in Sydney. That is the last that was done in the matter.
  16. Have the Commissioners ever objected to enter on the claim again? Not at all.
  17. Has any formal application for compensation been made to the Commissioners by Mr. Whyte? No; he has applied for a crossing.
  18. Would the Commissioners hesitate to entertain his application if made? No; Mr. Barker, their solicitor, has instructions to proceed with this as with all other cases.
  19. Now with reference to the claim of Mr. Whyte for the crossing, what state is that in? There is a level crossing provided for the public on the spot, and this leads to the public road on this side (*referring to the map*) passing Mr. Whyte's land here; consequently he has a right of entrance here (*referring to map*).
  20. Is that the public road? Yes.
  21. *By Mr. Suttor:* Mr. Whyte says this is a mere sufferance road through Mr. Dangar's. He says the public road is on the banks of the river here (*referring to map*)? I see. I have seen the Government plan down at Newcastle where the road is made across here (*referring to map*).
  22. *By Mr. Jones:* Do the Commissioners hesitate to give the crossing? Yes.
  23. Why? Because they think Mr. Whyte has sufficient access as it is.
  24. Then, so far, the Commissioners have decided on Mr. Whyte's claims? So far they have decided not to give him a level crossing.
  25. *By Mr. Flood:* When Mr. Whyte sent in his claim, did he claim at so much an acre? The general claim was at so much an acre, but the sum submitted to arbitration was £1,600.
  26. Why did you not go into that sum? Because it included a piece of land which was never taken from Mr. Whyte.
  - 27.

27. *By the Chairman*: Did he make his claim at per acre in writing? Yes.
28. You are quite satisfied he made it at per acre? Yes.
29. *By Mr. Flood*: Did I not understand you to say that the claim at per acre was not submitted to the arbitrators? No; it was the lump sum.
30. When it was discovered that Mr. Whyte did not own the four acres why did you not go on? It was not discovered that it did not belong to Mr. Whyte until the arbitrators called for his own deeds.
31. Did Mr. Whyte claim the land? I cannot say he claimed it, but it was thought to be his until his deeds appeared.
32. What is the usual course pursued by the Commissioners as to crossings in general? In almost every case where deemed necessary, when we cut off land, we give a level crossing.
33. Are the parties consulted? Generally.
34. Suppose the Commissioners still continue to refuse Mr. Whyte a crossing near the west boundary of his land, will it not submit the public to great inconvenience and danger by his driving of cattle towards Newcastle through a road which is becoming thickly populated? It is so short a road that I do not think there would be much danger.
35. Do you not think if the Commissioners gave him a crossing near the western boundary it would lessen the risk of the public? To some extent it would.
36. What would it cost the public to construct a crossing? I should hardly think it could be done under £400.
37. Is there anything in the Act which gives the Railway Commissioners the power of closing up land without reference to crossings, or without consulting the parties concerned as to whether they require crossings? In several cases it is so. The Commissioners have power to purchase and not give the crossings.
38. And assess the damages accordingly? Yes.
39. You say the Commissioners are quite willing to go into the whole question as a new matter? Quite willing. I believe it was suggested at the time of the arbitration by Mr. Barker that Mr. Whyte should commence *de novo*.
40. Are you aware whether this claim has been reconsidered with respect to the level crossings; are the Commissioners more favourable to the crossing? Not to the level crossing. I may perhaps mention, that the bridge across the road has been made wider.
41. Cottage Bridge? Yes.
42. Has it been made wider for the express convenience of parties on this side of the road? Yes.
43. *By Mr. Suttor*: Could not Mr. Whyte send in his claim for the crossing, and state that, if not allowed, he must make his claim for compensation greater? Yes; he might.

C. J. Neelds,  
Esq.  
6 March, 1857.

#### SEPARATE APPENDIX.

#### PETITION OF WILLIAM HENRY WHYTE.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of William Henry Whyte,—

Humbly Sheweth:—

That your Petitioner is resident in the City of Newcastle, New South Wales, and was in the year 1853 in full possession of Land, known as Wickham Paddock, situated on and with a frontage to the Maitland Road, since which time the Commissioners for Railways have taken possession of a portion of the same, and have raised an embankment thereon, and right through the said land, dividing it into two unequal parts, and have occupied by a Railway the portion which abuts upon the Maitland Road, and between the remaining portion which your Petitioner occupies for the purposes of his business, and thus your Petitioner is cut off from the free use and convenient approach to his land.

The business of your Petitioner being that of a butcher, contractor, and dealer in stock, had appropriated this property to the purpose of keeping fat stock in paddocks, and whereon he had erected a slaughter-house, boiling-down-house, hide-house, labourers' cottages, stables, and other appurtenances requisite for the purposes of his trade, and had enjoyed, previous to this severance by the Railway, free ingress to his premises from the Maitland Road.

Your Petitioner complains that at present he is deprived of that free use he formerly enjoyed of this land, in consequence of the inadequacy of the crossing afforded by the said Commissioners over this line as an approach to these premises, and that instead of his having a right of way as heretofore from the Maitland Road direct, he is compelled to go round for a considerable distance, nearly half a mile, as shown in the accompanying Plan, and upon sufferance, and under circumstances, which render his premises far less accessible than formerly, and subject to risk and danger to his interests and those of the public.

Your Petitioner feels assured, from his experience with fat cattle, that in attempting to drive a mob of them into his premises across this line of rail, upon a level, and through so narrow an aperture as the Commissioners have provided, will be attended in the course of probable events with danger, not only to the cattle, but to the lives of passengers on the line at this particular spot.

Your Petitioner, therefore, having drawn the attention of the Commissioners to the liability of danger from this cause, and having requested of them a wider and more direct entrance, with a view to avoid those consequences, has been refused: he, therefore, prays that your Honorable House will take such measures for the protection of Petitioner's interests and the public safety as in its wisdom it may deem requisite.

And your petitioner will ever pray.

WILLIAM HENRY WHYTE.



1857.

NEW SOUTH WALES.

Legislative Assembly.

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"

**FINAL REPORT**

FROM

**THE SELECT COMMITTEE**

ON THE

**"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"**

WITH REFERENCE TO

**RAILWAY EXTENSION;**

TOGETHER WITH

**THE PROCEEDINGS OF THE COMMITTEE,****MINUTES OF EVIDENCE,**

AND

**APPENDIX.**


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**ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,**  
17 March, 1857.

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**Sydney :**

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

13. Sole Commissioner of Railways Incorporation Bill:—Mr. Manning moved, That this Bill be now read a second time;—  
Whereupon Mr. Cowper moved, pursuant to *amended contingent* notice,—That the Question be amended by the omission of all the words following the word “That” at the commencement, with a view to the insertion in their place of the words, “this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers.”  
“(2.) That such Committee consist of Mr. Barker, Mr. R. Campbell, Mr. Flood, Mr. Hay, Mr. Martin, Mr. Murray, Mr. Oxley, Mr. Scott, Mr. Suttor, and the Mover.”  
Debate ensued.  
Question—That the words proposed to be omitted stand part of the Question—put and negatived;—  
And Mr. Hay having required that the proposed Committee be appointed by Ballot,—  
Question—That the words, “this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and report upon the present state of the Railway Department, with power to send for persons and papers,” be inserted in place of the words omitted—put and passed.  
Question—That this Bill be referred to a Select Committee; and that such Committee be also instructed to inquire into and Report upon the present state of the Railway Department, with power to send for persons and papers—put and passed;—  
Whereupon the House proceeded to the Ballot, and the Speaker declared the following Members, being inclusive of the Mover of the Committee and of the Member in charge of the Bill, to be the Committee duly appointed, viz.:—Mr. Cowper, Mr. Hay, Mr. Flood, Mr. Murray, Mr. Oxley, Mr. Jones, Mr. Barker, Mr. Martin, Mr. Macarthur, and Mr. Suttor.

VOTES No. 56. TUESDAY, 9 DECEMBER, 1856.

14. Railways:—Mr. Faucett, on behalf of Mr. George Macleay, moved, pursuant to notice standing in the name of Mr. George Macleay seventh on the Notice Paper for to-day, That the Petition from Mr. Stephen Hale Marsh, presented by Mr. George Macleay on the 25th of September, be referred to the Select Committee now sitting on the Bill for incorporating the Sole Commissioner of Railways.  
Question put and passed.  
15. Mr. Henry Harvey Read:—Mr. Parkes moved, pursuant to notice, That the Petition of Mr. Henry Harvey Read, presented by him on the 8th of August, be referred for consideration to the Select Committee now sitting on the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 56. WEDNESDAY, 10 DECEMBER, 1856.

33. Railway Extension:—Mr. Hay moved, pursuant to notice, That His Excellency the Governor General's Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony, be referred to the Select Committee for whose consideration and report was referred the Sole Commissioner of Railways Incorporation Bill.  
Question put and passed.

VOTES No. 63. SATURDAY, 20 DECEMBER, 1856.

30. Desecration of the Sabbath:—Mr. Gordon moved, pursuant to notice,—  
(1.) That the Petition presented by him on the 18th instant, praying the House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.  
(2.) Mr. Gordon moved, pursuant to notice, That the Petitions presented by him on the 17th instant, from the Rev. Dr. M'Kay, and certain Members of his Congregation in Sydney, and from the Rev. William M'Intyre, and the Members of his Congregation in Maitland, praying this House to put a stop to the Desecration of the Sabbath by running of Railway Trains, &c.; be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed and referred accordingly.

VOTES No. 66. SATURDAY, 3 JANUARY, 1857.

13. Desecration of the Sabbath :—

(1.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 12th December last, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed and referred accordingly.

(2.) Mr. Marks moved, pursuant to notice, That the Petition presented by him on the 31st December last, from the Free Church Congregations at Shell Harbour and Terry's Meadows, praying the abolition of Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 67. TUESDAY, 6 JANUARY, 1857.

12. Desecration of the Sabbath :—

(1.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition, ordered by this House to be printed, on the 18th November, 1856, from the Rev. James Cameron, Moderator of the Synod of Eastern Australia, against Sabbath desecration; and the Petition on the same subject, ordered to be printed on the 17th December, 1856, from the Rev. Alexander Macintyre and the Congregation assembling at Abalton, in the County of Durham, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

(2.) Mr. Jones, on behalf of Mr. Gordon, moved, pursuant to notice, That the Petition of the Free Presbyterian Congregation of Sboalhaven, presented by Mr. Gordon on the 30th December last, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.

VOTES No. 74. WEDNESDAY, 21 JANUARY, 1857.

13. Desecration of the Sabbath :—Mr. Parker moved, pursuant to notice, That the Petition of certain Members of the Church of Scotland, resident in and near Parramatta, against the desecration of the Sabbath by the running of Railway Trains, presented by him on the 13th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

16. Desecration of the Sabbath :—Mr. Oakes moved, pursuant to notice, That the Petition of certain Members of the Wesleyan Congregations in the Town and District of Parramatta, against the Desecration of the Sabbath by the running of Railway Trains, presented by him on the 15th instant, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

VOTES No. 77. FRIDAY, 23 JANUARY, 1857.

20. Desecration of the Sabbath :—Mr. Piddington moved, pursuant to notice, That the Petition of certain Inhabitants of Singleton against the Running of Railway Trains upon the Sabbath, presented by him on 9th December, be referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be referred accordingly.

VOTES No. 79. WEDNESDAY, 28 JANUARY, 1857.

13. Desecration of the Sabbath :—Mr. Parker moved, pursuant to notice, That the Petition presented by him yesterday, from the Minister, Churchwardens, and Members of the Congregation of Saint John's Church, at Parramatta, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.

Question put and passed.

Ordered to be printed, and referred accordingly.



## VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

14. Desecration of the Sabbath :—Mr. Cowper moved, pursuant to *amended* notice, That the Petition presented by him on the 29th ultimo, from certain Inhabitants of the City of Sydney, and of its Suburbs, praying the adoption of measures to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.

## VOTES No. 85. FRIDAY, 6 FEBRUARY, 1857.

8. Desecration of the Sabbath :—Mr. Gordon moved, pursuant to notice, That the Petition presented by him on the 3rd instant, from the Presbyterian Congregation worshipping in Macquarie-street, praying this House to put a stop to Railway Traffic on the Sabbath, be printed, and referred to the Select Committee on Railways now sitting.  
Question put and passed.  
Ordered to be printed, and referred accordingly.

## VOTES No. 94. WEDNESDAY, 25 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to certain Petitions referred for their consideration and report.  
Ordered to be printed.

## VOTES No. 96. FRIDAY, 27 FEBRUARY, 1857.

5. Sole Commissioner of Railways Incorporation Bill :—  
(1.) Mr. Cowper, as Chairman, brought up a Second Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 19th November last, together with the said Bill as amended by the Committee.  
Ordered to be printed.  
(2.) Mr. Hay then moved, That the second reading of this Bill stand an Order of the Day for Wednesday next.  
Question put and passed.

## VOTES 98. WEDNESDAY, 4 MARCH, 1857.

10. Mr. William Henry Whyte :—Mr. Flood moved, pursuant to *amended* notice,—That the Petition presented by him, yesterday, from Mr. William Henry Whyte, praying the adoption of measures to protect his interests, and the public safety, in the matter of a portion of his land, known as Wickham Paddock, which abuts upon the Maitland Road, which has been taken for Railway purposes by the Commissioners of Railways, be referred to the Select Committee on Railways.  
Question put and passed.

## VOTES No. 100. FRIDAY, 6 MARCH, 1857.

1. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Third Progress Report from the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed on 19th November last, in reference to the Message of His Excellency the Governor General, No. 11, which was referred to that Committee on the 10th December last.  
Ordered to be printed.

## VOTES No. 105. FRIDAY, 13 MARCH, 1857.

2. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up a Fourth Progress Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, in reference to the Petition of Mr. William Henry Whyte, which was referred to that Committee on the 4th instant.  
Ordered to be printed, together with the accompanying Appendix.

## VOTES No. 106. TUESDAY, 17 MARCH, 1857.

7. Sole Commissioner of Railways Incorporation Bill :—Mr. Cowper, as Chairman, brought up the Final Report from, and laid upon the Table the Evidence taken before, the Select Committee on the Sole Commissioner of Railways Incorporation Bill, appointed 19th November last.  
Ordered to be printed.

1857.

“SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,”

WITH REFERENCE TO

RAILWAY EXTENSION.

FINAL REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 19th November, 1856, the “*Sole Commissioner of Railways Incorporation Bill*,” with instructions “*to inquire into and report upon the present state of the Railway Department, with power to send for Persons and Papers*,” and to whom were further referred, on the 9th December last, Two *Petitions*, from *Mr. Stephen Hale Marsh* and *Mr. Henry Harvey Read* respectively, on the 10th of the same month “*His Excellency the Governor General’s Message No. 11, with the accompanying Papers, respecting the extension of Railways in this Colony*,” and subsequently from time to time various *Petitions praying the House to put a stop to Railway Traffic on the Sabbath*, and who on the 25th ultimo brought up a *Progress Report* in reference to the said *Petitions*; on the 27th ultimo a *Second Progress Report*, together with the Bill, as amended; on the 6th instant, a *Third Progress Report*, in reference to Railway Extension; and, on the 13th instant, a *Fourth Progress Report* on the *Petition of Mr. William Henry Whyte*, referred for their consideration on the 6th instant;—have agreed to the following Final Report:—

Your Committee have now to lay before your Honorable House that portion of the Evidence taken by them which has not been already submitted, as the immediate prorogation of Parliament will prevent them from making any Report upon the larger questions suggested in the Message of the Governor General, No. 11, which was referred for their consideration.

Upon the subjects of the description of Railway to be constructed beyond the more thickly populated Districts, and the extent to which the finances of the Colony should be pledged for such service, your Committee do not feel themselves to be in a position to offer any opinion, without having a larger body of Evidence, and longer time for deliberation. They consider that, before any steps are taken to carry Railways beyond the points already sanctioned, a Committee should be appointed to complete the inquiry which they have commenced.

The labours of your Committee have, however, it is hoped, been useful, in revising the Railway Estimates which were originally laid before the Assembly, and in amending the Bill for regulating the construction of Railways, which they regret it was not found possible to pass into law during the present Session. Your Committee recommend that the attention of the Government should be drawn to the unsatisfactory state of the Railway Surveys. The sum of £50,000, voted by the late Legislative Council, is now being expended without that proper control which, in the opinion of your Committee, ought to be exercised over those employed in the important duty of laying down lines for works of so costly a nature.

From the Evidence of both Captain Mann and Mr. Whitton, it would seem that the persons engaged in the Surveys are not, in any respect, under their direction, nor have the Railway Commissioners any opportunity of knowing how their time is occupied.

Your Committee would, therefore, recommend that the Railway Commissioners should have the exclusive control over all persons engaged in making Surveys for Lines of Railway.

Your Committee also directed their attention to the Charges for Railway Traffic, which are much complained of by the Public, as being excessive. The subject is one which, in their opinion, ought to be further investigated; for although your Committee have not felt justified in making any recommendation for reducing them, in opposition to the Evidence of the Chief Commissioner for Railways and the Engineers, they nevertheless entertain a strong impression that the revenue derived from the Railway will be increased, and the interests of the Public generally promoted, by the adoption of a more liberal system of management than that now in operation.

CHARLES COWPER,  
*Chairman.*

*Legislative Assembly Chamber,  
Sydney, 17 March, 1857.*

PROCEEDINGS OF THE COMMITTEE.

WEDNESDAY, 27 NOVEMBER, 1856.

**Members Present:—**

Mr. Cowper,	Mr. Martin,
Mr. Barker,	Mr. Suttor,
Mr. Flood,	Mr. Macarthur.

Mr. Cowper was called to the Chair.

Committee deliberated as to the most expedient course to pursue with respect to this Bill, and as to the advisability of re-constructing it.

Motion made, and *Question*—"That G. K. Mann, Esquire, Chief Commissioner of Railways, be summoned before this Committee, as a witness, on Wednesday next"—*agreed to*.  
[Adjourned till Wednesday next, at half-past Eleven o'clock.]

WEDNESDAY, 3 DECEMBER, 1856.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Flood,	Mr. Macarthur,
Mr. Hay,	Mr. Suttor,
Mr. Martin,	Mr. Oxley.
Mr. Barker.	

Mr. G. K. Mann, Chief Commissioner for Railways, examined.

Committee deliberated as to whether it would be the more expedient plan to place the supervision of all Railways under two distinct heads, viz.:—An Engineer-in-Chief, who would superintend their design and construction, and a Manager, who would overlook the working of the various lines, regulate the fares, and discharge all the financial business appertaining thereto, both such heads being, in the transaction of their duties responsible to the Executive Government; or to vest their entire management and control in one Commissioner, to be in the discharge of the functions of his office immediately under the supervision and direction of the Executive Government.

Motion made, (Mr. Barker) and *Question*—"That in the opinion of this Committee it is expedient that there should be one Commissioner, having in his charge the general superintendence and management of all matters relating to Railways; such Commissioner to exercise his functions under the direction of the Executive Government"—*agreed to*.

Committee then deliberated as to the advisability of incorporating such Commissioner.  
[Adjourned till Tuesday next, at half-past Eleven o'clock.]

TUESDAY, 9 DECEMBER, 1856.

**Members Present:—**

Mr. Macarthur,	Mr. Suttor.
Mr. Hay.	

Mr. Macarthur, in the absence of the Chairman, was called to the Chair.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last meeting of the Committee.

Committee deliberated as to the best mode of re-constructing the Bill, and were of opinion that it was inexpedient to agree to any definite resolution on so important a matter without a larger attendance of Members, and determined therefore, that another meeting of the Committee should be convened for Thursday next, for the purpose of then considering its re-construction.

[Adjourned till Thursday next, at Eleven o'clock.]

THURSDAY, 11 DECEMBER, 1856.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Jones,	Mr. Flood,
Mr. Suttor,	Mr. Macarthur,
Mr. Oxley,	Mr. Barker.
Mr. Hay.	

Committee had before them two Petitions, from Mr. H. H. Read and Mr. S. H. Marsh, respectively, referred to them on the 9th instant, and considered the same.

Committee deliberated as to the re-construction of the Bill, more particularly with reference to the incorporation of the Commissioner, and the powers to be given to him under such incorporation.

Motion made (Mr. Macarthur) and *Question*—"That in the opinion of this Committee it is expedient to incorporate the Commissioner for general purposes, subject, however, in  
" all

" all matters relating to the taking of lands and making of contracts, to such Rules and Regulations as the Executive Government may, from time to time, see fit to enact"—  
agreed to.

Committee having considered Clauses 6 to 15 (*inclusive*), resolved to strike them out of the Bill.

Clauses struck out accordingly.

Committee then proceeded to consider several other Clauses of the Bill, and determined on various Amendments to be made therein.

Committee then adjourned.

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THURSDAY, 8 JANUARY, 1857.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Hay,  
Mr. Martin,

Mr. Oxley,  
Mr. Jones.

The Chairman having submitted to the Committee a copy of the Bill, showing in manuscript certain amendments noted therein, in accordance with instructions given by them for its re-construction, Committee directed the same, or a copy thereof, to be sent to Mr. Whitton, the newly appointed Engineer-in-Chief to the Railway Commissioners, for the purpose of inviting his opinion with respect to the Bill, as now amended by them.

Resolution of the House, referring to the Committee, on the 10th December last, the Governor General's Message No. 11, together with accompanying Papers respecting the Extension of Railways in this Colony, read.

Committee considered the Message and Papers thus referred.

Motion made and *Question*—" That a Special Meeting of this Committee, for the purpose of maturely considering the Message and its accompanying Papers, be called for Tuesday next, and that John Whitton, Esquire, be summoned before this Committee, as a witness, on that day"—*agreed to*.

[Adjourned till Tuesday next, at Eleven o'clock.]

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TUESDAY, 13 JANUARY, 1857.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Jones,  
Mr. Macarthur,

Mr. Murray,  
Mr. Barker.

Committee met, pursuant to a Resolution agreed to at their last meeting, specially to consider the Minute of His Excellency the Governor General relative to Railway Extension in this Colony.

Mr. Whitton, Engineer-in-Chief to the Railway Commissioners, who was in attendance to give evidence before the Committee, having been called in, stated that in consequence of his recent arrival in the Colony, and the numerous other important matters pressing upon his more immediate attention since his arrival, he had at present no opportunity of carefully considering the propositions contained in the Governor General's Minute, and was therefore desirous that the Committee should postpone his examination for a short period, so as to enable him to make himself thoroughly conversant with its contents.

Committee deliberated and *resolved* :—

" That the examination of Mr. Whitton be postponed until Friday next, for the purpose of enabling him to carefully consider the Minute of the Governor General on Railway Extension, and the amendments proposed to be made by the Committee in the Bill, which they were appointed to consider and report on."

[Adjourned till Friday next, at Eleven o'clock.]

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FRIDAY, 16 JANUARY, 1857.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Hay,  
Mr. Flood,

Mr Suttor,  
Mr. Martin,

Mr. Jones.

Mr. J. Whitton, Engineer-in-Chief to the Railway Commissioners, examined.

In the course of his examination, the witness, at the request of the Chairman, went through various Clauses of the Bill, and suggested such amendments as it occurred to him advisable to make therein.

[Adjourned till Wednesday, 4 February, at half-past Eleven o'clock.]

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WEDNESDAY,

WEDNESDAY, 4 FEBRUARY, 1857.

Members Present:—

Charles Cowper, Esquire, in the Chair.
Mr. Suttor, Mr. Jones, Mr. Hay, Mr. Flood, Mr. Oxley.

Committee further considered Petition of Mr. Henry Harvey Read, praying investigation into the loss alleged to have been sustained by him in consequence of injury done to his property by the construction of the Railway Bridge and Sewerage in George-street south, and for which compensation had been refused by the Railway Commissioners.

Mr. H. H. Read, Petitioner, and Mr. C. Nealds, Secretary to the Railway Commissioners, examined. Witnesses withdrew.

Committee deliberated on the allegations contained in the Petition, and Resolved:—

- 1. That in the opinion of this Committee Mr. H. H. Read has failed to make his claim for compensation for the injury alleged to have been done to his property, in the way the law requires, and consequently they cannot recommend the House to make any movement in the matter of his Petition.
2. That the Petitioner be recalled and apprised by the Chairman to this effect.

Whereupon Mr. Read was recalled, and informed in the terms of the foregoing Resolution.

Committee then proceeded with the further consideration of the various Clauses of the Bill and the Schedule attached thereto.

Several amendments made.
Classes 4, 17, 32, 80, 105, 113, 114, 124 to 134 (inclusive) struck out.
Certain new Clauses read, agreed to, and inserted.

Committee then ordered an immediate Re-print of the Bill, showing the words added by them in Italics.

Committee further considered the Petition of Mr. S. H. Marsh, praying the House to take into its consideration certain propositions made by him respecting Railway Communication in this Colony, and deliberated as to whether the allegations set forth therein were of such a nature as to render it necessary to summon the Petitioner for the purpose of being examined thereupon.

Motion made (Mr. Suttor) and Question—“That Mr. S. H. Marsh be summoned before this Committee, as a witness, on Tuesday next,”—agreed to.
[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY, 10 JANUARY, 1857.

Members Present:—

Mr. Cowper, Mr. Jones.

A Quorum of Members not being present, no meeting of the Committee was held on this day.

WEDNESDAY, 25 FEBRUARY, 1857.

Members Present:—

Charles Cowper, Esquire, in the Chair.
Mr. Hay, Mr. Flood, Mr. Jones, Mr. Macarthur, Mr. Barker, Mr. Suttor.

The Chairman having informed the Committee that the Clerk had been unable to serve Mr. Marsh with a Summons, and that an impression prevailed that he had left the Colony:—

Committee deliberated, and Resolved:—
“That this Committee considers that, as the Petitioner appears to have left the Colony, no further steps can be taken with respect to his Petition.”

Committee then considered the various Petitions referred to them praying the House to put a stop to Railway Traffic on the Sabbath, shewn in the annexed Schedule,—

Table with 4 columns: When referred to Committee, From whom, and whence, presented to the House, By whom presented to the House, Abstract of Prayer. Rows list various petitions from 1850 to 1847 regarding Sabbath traffic.

and Resolved:—

“ That this Committee deem it inexpedient to introduce into the Bill, referred for their consideration, a Clause providing for the prohibition of Railway Traffic on the Sabbath.”

Committee, after further deliberation, agreed to bring up a Progress Report with reference to the various Petitions referred to them, and requested the Chairman forthwith to draft a Progress Report thereupon, and the Chairman having prepared such Report,—

Motion made and Question—“ That the Draft Progress Report proposed by the Chairman be now read,”—*agreed to.*

Report read accordingly.

Whereupon Motion made and Question—“ That this be the Progress Report of the Committee,”—*agreed to.*

Chairman requested to Report Progress to the House, together with the Minutes of Evidence taken on the Petition of Mr. H. H. Read.

Committee then considered the 45th Clause of the Bill, *as amended*, relating to the mode of estimating the purchase-money and compensation to be paid under its provisions.

Motion made (Mr. Macarthur) and Question—“ That this Clause be amended,—

“ 1. By the omission, after the word ‘ required,’ in line 28, of the words ‘ for the,’ with a view to the insertion of the words ‘ and without reference to any alteration in such value, arising from the establishment of such.’

“ 2. By the omission, after the words ‘ Railway or other works,’ of the words ‘ and the said Justices, Arbitrators, Jury, and Surveyors, in assessing such compensation, are authorized and empowered, and shall take into consideration, in reduction of such compensation, the enhancement in value of the adjoining land belonging to the party to whom compensation is to be made, by the increased facilities of access to the different Stations and Termini of the said Railway, or otherwise, by reason of the making of such Railway;” —*agreed to.*

Whereupon Chairman requested to Report the Bill, as amended, to the House.

Committee then further considered the Governor General’s Message No. 11, together with the accompanying Papers respecting Extension of Railways in this Colony.

Motion made (Mr. Barker) and Question—“ That G. K. Mann, Esquire, be summoned before this Committee, as a witness, for to-morrow, to be examined more particularly in reference to the details of the sum of £400,000 proposed, in the Estimates of 1856-7, to be expended in the Extension of Railways, and the propositions contained in the Governor General’s Message No. 11 and the accompanying Papers,”—*agreed to.*

[Adjourned till to-morrow, at Eleven o’clock.]

THURSDAY, 26 FEBRUARY, 1857.

**Members Present:—**

	Charles Cowper, Esquire, in the Chair.	
Mr. Hay,		Mr. Jones,
	Mr. Macarthur.	

Mr. G. K. Mann, further examined.

Motion made and Question—“ That J. Brady, Esquire, and J. Whitton, Esquire, be summoned before this Committee, as witnesses, for to-morrow, to be examined more particularly in reference to the details of the sum of £400,000, proposed, in the Estimates of 1856-7, to be expended in the Extension of Railways, and the propositions contained in the Governor General’s Message No. 11, and the accompanying Papers,”—*agreed to.*

[Adjourned till to-morrow, at Eleven o’clock.]

FRIDAY, 27 FEBRUARY, 1857.

**Members Present:—**

	Charles Cowper, Esquire, in the Chair.	
Mr. Suttor,		Mr. Hay,
Mr. Jones,		Mr. Flood,
Mr. Macarthur,		Mr. Barker.

Mr. J. Whitton, further examined.

[Adjourned till Tuesday next, at Twelve o’clock.]

TUESDAY, 3 MARCH, 1857.

**Members Present:—**

	Charles Cowper, Esquire, in the Chair.	
Mr. Hay,		Mr. Barker,
Mr. Jones,		Mr. Macarthur,
Mr. Flood,		Mr. Suttor.

Mr. J. Brady, Engineer for the Southern Districts to the Railway Commissioners, examined.

Witness withdrew.

Committee then deliberated respecting the Expenditure of the Funds for Railway Extension in 1857, as set forth in the detailed Estimate handed in by the Chief Commissioner for Railways on the 26th ultimo.

[Adjourned till Thursday next, at Eleven o’clock.]

THURSDAY,

THURSDAY, 5 MARCH, 1857.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Hay,  
Mr. Suttor,  
Mr. Jones,

Mr. Barker,  
Mr. Macarthur,  
Mr. Flood.

Committee deliberated relative to their proposed Progress Report on Railway Extension. The Chairman directed the Clerk to address a letter to J. Whitton, Esquire, requesting his immediate attendance before the Committee, as a witness.

Committee further deliberated relative to their proposed Progress Report.

Mr. J. Whitton further examined.

Resolution of the House,—referring to the Committee *yesterday* the Petition from Mr. William Henry Whyte, praying the adoption of measures to protect his interests, and the public safety, in the matter of a portion of his land, known as Wickham Paddock, which abuts upon the main road, and which has been taken for Railway purposes by the Commissioners of Railways,—read.

Petition then read. (*Vide Appendix* )

Motion made (Mr. Flood) and Question—"That this Petition be printed in an Appendix to such Report as the Committee may hereafter make with reference to Mr. Whyte's case"—*agreed to*.

Mr. J. Whitton then examined,—with reference to this Petition.

Witness withdrew.

Motion made and Question—"That Mr. W. H. Whyte be summoned before this Committee, as a witness, for to-morrow"—*agreed to*.

Committee then further considered the detailed Estimate of the Funds proposed to be expended for Railway Extension in 1857.

[Adjourned till to-morrow, at Eleven o'clock.]

FRIDAY, 6 MARCH, 1857.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Hay,  
Mr. Macarthur,  
Mr. Suttor,

Mr. Jones,  
Mr. Flood,  
Mr. Barker.

Committee considered an *amended* Estimate for Railway Extension in 1857, and concurred therein.

The Chairman then brought up a Draft Progress Report with reference to "Railway Extension," recommending the *amended* estimate to the favorable consideration of the House.

Motion made and Question—"That the Draft Progress Report proposed by the Chairman be now read"—*agreed to*.

Draft Report read accordingly.

Whereupon Motion made and Question—"That this be the Third Progress Report of the Committee"—*agreed to*.

Chairman requested to report further Progress to the House.

Committee then further considered the Petition of Mr. William Henry Whyte.

Mr. W. H. Whyte, Petitioner, and Mr. C. Nealds, Secretary to the Railway Commissioners, examined.

Witnesses withdrew.

Committee deliberated.

Motion made (Mr. Jones) and Question—"That the Chairman prepare a Draft Report with respect to this Petition for the consideration of the Committee"—*agreed to*

[Adjourned till Friday next, at Eleven o'clock.]

FRIDAY, 13 MARCH, 1857.

**Members Present:—**

Charles Cowper, Esquire, in the Chair.

Mr. Jones,  
Mr. Flood,

Mr. Macarthur,  
Mr. Suttor,

Mr. Oxley.

Committee considered a Fourth Progress Report, with reference to the Petition of Mr. W. H. Whyte, and agreed thereto.

Chairman requested to report *further* Progress to the House, together with the Minutes of Evidence on this Petition.

Committee then deliberated on their Final Report with reference to Railway Extension, and agreed thereto.

Whereupon Chairman requested to report to the House, together with the Minutes of Evidence on Railway Extension.



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## PETITION OF MR. H. H. READ.

*Wednesday, 4 February, 1857.*

Mr. H. H. Read, Petitioner .. .. .	} Vide Progress Report, dated 25 February, 1857.
C. Nealds, Esq., Secretary to the Railway Commissioners .. .. .	

## "SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL."

*Wednesday, 3rd December, 1856.*

G. K. Mann, Esq., Chief Commissioner for Railways .. .. .	} Vide Second Progress Report, dated 27 February, 1857.
J. Whitton, Esq., Engineer-in-Chief to Railway Commissioners .. .. .	

## PETITION OF MR. W. H. WRYTE.

*Thursday, 5 March, 1857.*

J. Whitton, Esq., Engineer-in-Chief to Railway Commissioners .. .. .	} Vide Fourth Progress Report, dated 13 March, 1857.	
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Mr. W. H. Whyte, Petitioner .. .. .		
C. Nealds, Esq., Secretary to Railway Commissioners .. .. .		

1857.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

"SOLE COMMISSIONER OF RAILWAYS INCORPORATION BILL,"

WITH REFERENCE TO

RAILWAY EXTENSION.

THURSDAY, 26 FEBRUARY, 1857.

Present:—

Mr. COWPER,  
Mr. HAY,Mr. JONES,  
Mr. MACARTHUR.

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

Gother Kerr Mann, Esquire, Chief Commissioner of Railways, called in and further examined:—

1. *By the Chairman:* Can you give the Committee any information as to the details of the estimates upon which the vote of £400,000, for the extension of Railways, is asked for upon the Estimates for 1857? I beg to hand in an estimate of the money required for Railway Extension in 1857. (*The witness handed in the same Vide Appendix A.*) This amounts to £361,350 for the works, as therein stated in detail. The balance between that sum and the £400,000 asked for, is the balance required to complete the works, towards which the Assembly voted a round sum of £200,000 in the month of September last. With reference to item 6, "Extension from West Maitland, eight miles," I beg to offer some explanation. The surveys instituted for getting out of West Maitland were first of all taken by Stoney Creek, where the line would intersect the Wollombi Road, about three miles from Maitland. After these sections had been made to a certain distance, we got information that by going more to the left a much more level and better line throughout would be found. That line has been surveyed, and found to intercept the Wollombi Road at eight miles from West Maitland. This second line appeared to be very favorable in the first instance. Under this impression eight miles was proposed, but on a more careful examination and comparison of the two surveys, it was found that the original direction was by far the best, being about five miles shorter, and the amount of cutting required, on the whole, probably less than that which would have had to be done on the second trial-line,—it went through a better country. The original line, therefore, will be carried out, intersecting the Wollombi Road at about three miles. Following the line now determined upon, a distance of eight miles will carry the Railway to Lochinvar, considerably beyond its intersection with the Wollombi Road.

2. I see you have put down the estimate for these eight miles at the same rate, £11,500 per mile, as the twelve miles between Liverpool and Campbelltown. Is that a mere arbitrary estimate? It is an arbitrary estimate. The Commissioners have not the same amount of details for those eight miles as for the Campbelltown line.

3. Is the estimate for the Campbelltown extension founded on calculation? It is founded upon actual estimate.

G. K. Mann,  
Esq.  
26 Feb., 1857.

G. K. Mann,  
Esq.  
26 Feb., 1857.

4. *By Mr. Hay*: All the quantities are worked out? Yes.
5. *By Mr. Macarthur*: Is not the Campbelltown line rather an easy one? There are a good many bridges on it, and a great deal of undulating land getting out of the town of Liverpool. On the whole it is an easy line.
6. *By the Chairman*: Will there be much embankment near Denham Court? Not any great amount, I think. The greatest amount of cutting appears to be near Liverpool.
7. I am speaking of embankments to keep it above the reach of floods. Will not a great deal of it have to be raised near Denham Court? No, I think not. There is no extraordinary amount of embankment upon it. One of the objects of the surveyor has been to keep it as high above the flood-mark as possible. Mr. Whitton, our Engineer-in-Chief, has the whole of these plans and the original estimates to supervise and check throughout. The plans and estimates were originally made by Mr. Brady. Since Mr. Whitton's arrival we have put them into his hands to check, and from what he has seen of them he thinks the line can be made for the sum stated. We have now a party out, making complete sections of the extension of six miles on to Menangle. Mr. Whitton reports very favourably of it as far as they have gone, and considers it likely not to be more expensive than the Campbelltown extension.
8. Is the estimate for the Campbelltown line based upon the prices given to the former contractor, or accommodated to the existing market rates? The prices are according to the market rates at the time the estimate was made.
9. *By Mr. Macarthur*: How have you estimated the amount for compensation for land? That is a matter that it is almost impossible to estimate. It is very difficult to say what the amount required will be. We have been guided by the number of claims and the general average rate of compensation upon the Liverpool line. We can only give an approximate estimate.
10. What was the average on the Liverpool line? If I remember right, it has been somewhere between £8 and £10 an acre.
11. *By the Chairman*: Have you not reason to suppose that contracts will be taken now at a much cheaper rate than formerly? I think they will.
12. *By Mr. Jones*: Have you made any allowance for that in the estimate? Yes.
13. Does this estimate of £11,500 per mile include all the expenses of forming the line? Yes; it includes stations, permanent way, rails, sidings, compensation for land, and so on.
14. Does it include all the buildings that will be required on the line at each end? Yes, as many as is conceived to be necessary for the working of the line at present.
15. *By Mr. Hay*: Sufficient to meet the traffic you expect on the line for some time? Yes.
16. *By Mr. Jones*: Does it include all the workshops? There will be no workshops on that line. They will be in Sydney.
17. Will there be none for temporary repairs? No; they will all be at Sydney.
18. Are you prepared to state that that estimate of £11,500 per mile will complete the Railway from Liverpool to Campbelltown? It is my firm belief that it will.
19. To what do you attribute the less cost of that extension as compared with the cost of the line between Parramatta and Liverpool? In the first place, all the works on the line between Parramatta and Liverpool are double-way works—the cuttings and bridges are all for a double-way—whereas this estimate for the extension to Campbelltown is only for single-way works. There is also a reduction made on former prices in this estimate, under the impression that the work can now be done much cheaper than it could have been done some time ago, when wages ranged higher than they do at present.
20. I understood you to say that the same steps have not been taken to ascertain the cost of the northern line as have been taken with respect to the southern line? The estimate for the northern line has been made merely from the preliminary surveys.
21. Then you are not prepared to speak with the same confidence as to the probable cost of the northern extension? I am not. The estimates are not so complete. But I believe, myself, that the sum named will do the work. I have a very confident opinion that the sum set down there, £11,500 per mile, will complete what is proposed.
22. *By Mr. Macarthur*: There is no great difficulty in the character of the country? No; the greatest difficulty is, I believe, a short distance out of Maitland—crossing Stoney Creek; but the engineers who have reconnoitred it, do not appear to lay any extraordinary stress upon it.
23. *By Mr. Jones*: You are aware that the line from Newcastle to Maitland has cost at the rate of £25,000 per mile altogether, including rolling stock and all? I do not think it has cost as much as that.
24. It appears so from returns we have had, including the amounts still to be expended? Perhaps it will, with additional expenditure; but the rolling stock is sufficient, with the addition of a locomotive or two, for perhaps one hundred and fifty miles of rail,—certainly one hundred miles,—and should not therefore all be charged to that line.
25. *By Mr. Hay*: What would be the cost per mile of the permanent way on the line between Newcastle and Maitland, including only what is set down in this estimate for the extension from Maitland? The stations are not completed on the Hunter River Line yet; but I think the actual permanent way and embankments and works have cost somewhere about £14,000 per mile, with rolling stock.
26. *By Mr. Jones*: Without the rails? No, that includes the rails.
27. It does not include the buildings? No. But they are double-way works on that line to Maitland, whereas only single-way works are proposed beyond Maitland.
28. *By the Chairman*: Have you reason to believe that the contractors made a very large profit on the construction of the line between Newcastle and Maitland? I am really unable to say. I should think it was a very good contract for them.
29. *By Mr. Hay*: What was the amount of their contract? I forget the exact amount, but I believe it was altogether somewhere about £200,000.

30. I mean the amount of Randle and Wright's contract? There were two contracts; one from Hexham to Maitland—I forget the amount now. G. K. Mann,  
Esq.
31. *By the Chairman:* I suppose you have paid them as much as £200,000, at all events? I do not remember. We have paid them very large sums. We did not pay it at all; some of it was paid for by the Company before the Government took over the works. There was some very heavy work on the Newcastle Line. 26 Feb., 1857.
32. With regard to the second item of this estimate you have handed in—“store at Sydney Terminus, £1,500”—is that absolutely necessary? I think it is. We have valuable machinery and material arriving very frequently, and we constantly have it on hand for repairs.
33. But you have a number of buildings there already? They are all occupied. We want additional carriage sheds at this moment. There ought to be a complete store for the whole line at the Sydney Terminus.
34. Is this building intended to be of stone or wood? It was intended to be a permanent building.
35. Is this a mere approximate estimate? It is.
36. With reference to the next item, for office buildings—do you not at present rent offices? Yes.
37. What is the rent? £400 a-year.
38. For how long are they taken? Six years.
39. Then that is not a pressing matter? No. But still, as Railway extension is carried on, we shall have to increase our office accommodation.
40. Where is it proposed to erect these buildings—at the terminus, or at some central point in the City? I think they should be at some central point in the City. The offices should be in connexion with the Government offices, and also with the works of the Railway.
41. In the event of the Railway being brought into the City, down Pitt-street, for instance, you would have the offices then at the final terminus? Yes.
42. Would it not, therefore, be better to wait until that point is decided, before you commence the erection of offices? That may be a matter for consideration.
43. The next item is, “Additional machinery for workshops at Sydney, £10,000”—is that absolutely necessary? I think it is.
44. I see it is stated here that this sum is “for the purchase of additional machinery necessary for the repair and construction of locomotives and rolling stock”—is it intended to make them in the Colony? No; but when that estimate was made there was a proposition that the machinery required for repairing them might easily be made to answer for their construction in case of necessity. In large repairing establishments it is very advisable to have some work of that kind in hand, so that at times when the men may not be fully employed, they can go to work to construct a locomotive. It is a custom in such establishments to have some work of the sort in hand.
45. Does it not increase the expense to have an establishment on a scale sufficient for the construction of the engines? No; you must keep up a large number of workmen for repairs, because very extensive repairs might happen to be required all at once; but there may be times in which the establishment is not fully occupied, though it would not be advisable to reduce it, and therefore it would be well to have the means of constructing engines and rolling stock to fill up the men's time.
46. Who has the immediate charge of the workshops? At present they are under Mr. Brady's charge. I think it will be necessary—in fact, it is a proposition of Mr. Whitton's now—that there should be a distinct locomotive manager.
47. You have not made that appointment yet? No.
48. I believe Mr. Brady's qualifications do not go so far in the department of mechanical engineering as in the other department? He has shewn a great deal of ability in it, but he does not profess it. He has paid a great deal of attention to it. At present Mr. Brady's services are not so fully required in other ways as they will be if Railway extension goes on; he will not then be able to devote the same amount of time to the workshops in Sydney as he has been able to do hitherto. I think it will become necessary to appoint a locomotive superintendent, a distinct officer, who perhaps should also have charge of the permanent way, and various other matters connected with the working of the line.
49. What is your establishment of engineers now under Mr. Whitton? There is Mr. Whitton himself; a resident engineer on the Hunter, Mr. Bell; a resident engineer here, Mr. Brady; and six assistants, draftsmen and surveyors.
50. Mr. Brady is charged with the management of the line at present? He is.
51. What is the meaning of the fifth item—“Incidental works at Sydney, £5,000”? There are constantly, from the increase of traffic on the Railway, calls for additional works to be put up; and I think a sum ought to be forthcoming to meet any contingency of the sort. For instance, additional sidings may be required at some particular point on the line; and in the event of more buildings being required at the Sydney Terminus, some additional excavation will be necessary.
52. Are you still carrying on any works at the Sydney Terminus? We are not, at present; but it will be necessary to excavate an additional portion of the ground there.
53. Without reference to the continuation to Pyrmont? If there is any excavation carried on, it will have to be carried down to Pyrmont for the embankment.
54. Will it be necessary to undertake any more works at the Sydney Terminus if you do not carry on the branch to Pyrmont? If the traffic increases we shall have to put up additional goods' sheds. When we get on to Menangle we certainly shall have to do that; and in that case we shall have to make more excavations.
55. *By Mr. Macarthur:* You anticipate a considerable increase of traffic from the extension of the line? Yes. I think when we reach Menangle or Campbelltown we will intercept the traffic of the southern road.

- G. K. Mann, Esq.  
26 Feb., 1857.
56. *By the Chairman:* Supposing you had contracts out for the line to Menangle, when do you think it might be at work? In nine or ten months, but not before. We have not the rails in the country yet.
57. What quantity of rails have you sent for? After providing for the extension of the Newcastle line through East and West Maitland, we shall have between four and five hundred tons of rails on hand.
58. Applicable to the Menangle or any other line? Yes.
59. Do you think it is necessary to send for any more? Decidedly.
60. Is any portion of this money intended for that purpose? Yes; the rails are included in the estimate for the extension to Campbelltown, and also in the eight miles extension from Maitland.
61. There is also an item for rails, amounting to £15,000? Yes; I think they ought to be sent for to have them on hand. It is advisable to have a stock of rails in the country, because we cannot get them without sending to England, which causes a great deal of delay in some cases; and we are unable to proceed with any work that may be decided upon, for want of rails.
62. *By Mr. Hay:* Besides, if anything were to happen to a ship coming out with rails, as in the case of the "Schomberg" at Melbourne, it might interfere very seriously with the opening of a line? Yes.
63. *By the Chairman:* Is this smithy and workshop at Newcastle necessary? I think so; though it may not be necessary to the full extent immediately, because we could do the heavy work at Sydney; but it will eventually be necessary, or else the locomotives will have to be brought backwards and forwards, at considerable cost.
64. Have you formed any idea what will be the amount of traffic on the Newcastle Line when it is opened? I know what the traffic is coming over the Long Bridge.
65. Have you reason to believe, from what you have heard, that there will be any traffic on the Railway from Maitland to Newcastle? I believe there will be a very large traffic.
66. Enough to keep the trains going? Enough to keep the trains going—perhaps on a limited scale in the first instance; but, when we get to West Maitland, I think we shall have a very heavy traffic. The quantity of goods going over the bridge at present is in excess of the traffic on the southern line.
67. You think you will attract the traffic from the steamers? I think we will take the whole of it, if we get to West Maitland.
68. *By Mr. Jones:* What rates are you likely to charge for goods? About five-pence per ton per mile; that will be about the average; but goods will be classed under different rates.
69. What are the present rates to Liverpool? Five-pence per ton per mile is about the average. There are three classes of goods; those requiring great care and attention being charged at a higher rate. I think we can afford to carry at an average rate of about five-pence per ton per mile. When the extension from Newcastle to the wharf is carried out we shall run the goods down to the vessels, and there will be no cartage from the terminus, which is a great drawback to the goods traffic on the southern line at present.
70. You look forward then to getting a large portion of the wool traffic? I do.
71. And also of the grain and other produce which is conveyed to Maitland? Yes; I think we should intercept it all at West Maitland, or the greater portion of it. We certainly should, if we carried the line eight miles beyond Maitland.
72. *By the Chairman:* The next item for "Machinery at Newcastle, £7,500," may be taken in connexion with the preceding item of £6,000 for the smithy, making, in fact, £13,500 for that establishment altogether? Yes.
73. If one may be postponed, I suppose the other may also? We shall require a certain amount of it, to enable us to effect ordinary repairs. If any accident happened to a locomotive on the line, it would not do to send it to Sydney for repair. But the heavier repairs might be done in Sydney, to a great extent.
74. These estimates appear to me to suggest two establishments on the same scale. As the Government now own all the Railways, and are likely to continue to do so, would it not be desirable, in order to save expense, to keep as much of the work as possible in Sydney, and to make the establishment at Newcastle a minor establishment? The estimates might, perhaps, be modified to a certain extent. There may not be occasion to have two extensive establishments at first; but still we must have a certain amount of repairing machinery at the Hunter.
75. Do you think these two items could be reduced from £13,500, as they are put together? It will go a very short way in bringing out any heavy machinery.
76. Have you prepared these estimates yourself, or were they prepared by any officer under you? I supervised the preparation of them—the Campbelltown and Sydney portions were prepared by Mr. Brady.
77. For sometime past, until Mr. Whitton's arrival, he has been your chief executive officer? Yes; but for works on the Hunter we have had Mr. Bell's opinion, as he is the Engineer of that line.
78. Have you considered whether it is necessary to have a second establishment? I think it will eventually be necessary to have a very complete repairing establishment at Newcastle, though not one of the same extent as that in Sydney.
79. With regard to the ninth item, for the purchase of materials, £5,000, I suppose that also is in round numbers? That can only be put in round numbers.
80. You have to import those materials? Materials will always have to be imported.
81. Do you import axles ready made? Yes.
82. And springs also? Some are ready made, and we also import spring steel; we have made springs here ourselves.
83. On what data has the next item been prepared, for Rolling Stock—is this pilot engine set down here for the Sydney Line? No, that is intended for the Newcastle Line, in connexion

nexion with the coal traffic; the coal waggons will be dropped on a siding, and be taken on by a pilot engine employed specially for that purpose.

84. I believe the engines you now have on the Sydney Line are too heavy for the traffic, and that you propose to have engines of a different character, which will be less costly? Yes, there would be a reduction in the price of them, and also a considerable saving in the cost of maintaining the permanent way by the employment of light engines. These heavy engines cause a considerable amount of wear and tear, beyond that which is necessary from the traffic.

85. I see there are two pattern coal waggons down in the estimate—have you not had them out before? We have a pattern coal waggon, but not the most recent one. It is proposed to get one or two of the best construction as patterns, and to get the material for others and make them in the Colony, the freight being such a heavy item.

86. "Freight, package, and erection, £10,650"—I suppose that is only an approximate estimate? It is a very close approximation.

87. With regard to the item for the Establishment, £12,500—are you prepared to give the Committee any details—what is your office and Engineer's establishment at present? The Engineer's establishment consists of the Engineer-in-Chief, two resident Engineers, and six Assistants, Draftsmen and Railway Surveyors. The Secretary's establishment is the Secretary himself and one clerk;—it will be necessary for him to have two clerks. There is also the Accountant, who will have a clerk. I should mention, that, if Railway extension is carried on, it may be necessary to increase the number of Assistants in the Engineer's office.

88. Does this estimate of £12,500 include the Hunter River Line? It does.

89. Will you have the goodness to furnish the Committee with the details of the proposed expenditure of this sum for the Establishment? I will. (*The witness handed in the same. Vide Appendix B.*)

90. It does not include the expense of working the Railway? No.

91. Could you favor the Committee with a return shewing all the salaries and expenses of working the line? Yes. (*The witness handed in the same. Vide Appendix C.*)

92. How often does your Board meet? We have a regular Board meeting once a week, and oftener, if necessary.

93. Who is associated with you now on the Board? Captain Hawkins. I believe Mr. Barker has resigned; I got a note from him to say he had resigned, but I have had no official intimation of it.

94. Captain Hawkins is about to leave also? Yes.

95. Are all the arrangements of the Railway Department subject to the direction of yourself and Captain Hawkins? At present.

96. What are Mr. Whitton's duties? He has charge of the general engineering duties of the Railways. Every engineering question is referred to him.

97. Nothing is done without his approval? No engineering matter is undertaken without his opinion being taken.

98. Has your Board anything to do with the surveys now going on by the Sappers and Miners? No.

99. Who has charge of them? The Surveyor General, I believe.

100. Do you know whether Captain Hawkins has anything to do with them? I believe they are immediately under him.

101. Do they not form matters of discussion at your Board? These surveys are carried on under instructions from the Surveyor General, and the results have been from time to time forwarded to us; but we have nothing to do with the management of the surveys—with the exception of having requested the Surveyor General to cause the country to be examined in certain directions.

102. Then the fact of Captain Hawkins being a member of your Board has no reference to his being in charge of these surveys—he does not communicate at all with your Board as the head of these surveys? Not officially. He is, I presume, under the Surveyor General, not the Railway Department at all.

103. And in fact does not communicate with you in respect to any of his operations? No.

104. And you do not communicate to him? Not officially.

105. You communicate officially with the Surveyor General? Yes.

106. *By Mr. Hay:* Do you not enjoy the advantage of all the information Captain Hawkins can give you from being employed on these surveys? Yes, we do. But I think the surveys ought to be under the Railway Department.

107. Was not that the reason of his appointment to the Board? I am not aware.

108. *By Mr. Macarthur:* I presume you could work a much greater extent of line without any great increase in the official establishments? Yes; the cost of the increase would not be in proportion to the extension of the line. But no doubt, as the extension proceeds, it will become necessary to increase the Engineer's establishment, and perhaps also the establishment generally, though to a limited extent compared with the present strength.

109. *By the Chairman:* When you were last before us, we asked you some questions with regard to the rates charged for the conveyance of passengers and goods, which had then been recently increased—do you still continue to charge the same rates? Yes; we have made no alteration.

110. What is your impression now, after having had further experience—do you think it was a judicious step to raise the rates? I think it would be injudicious to charge any lower rates than we are charging at the present moment.

111. You are still under the impression that you have not alienated any traffic? I think it will come back to the line. We are borne out in the opinion of rates by that of Mr. Whitton, who has gone into the subject.

112. Have you not had many representations made to you by parties who have stated their willingness to be your customers if you would lower your fares? We have had applica-

G. K. Mann, Esq. tions from some persons to lower the fares, but they were, and still continue to be, our customers.

113. You have not lost any of your customers in consequence of raising your rates? I do not think so.

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114. Has not Mr. Thompson, of Camden, withdrawn his custom? He has endeavoured to convince us that our rates of carriage were too high, but I believe his traffic is still coming by the Railway. There was a falling off in the number of passengers when the rates were raised; but it is well to mention that the rates that are charged now are nearly similar to those the line opened with originally. They were lowered some time afterwards, with the view of increasing the traffic, but it did not increase to any material extent. We, evidently, on the original rates, arrived at a maximum, and lowering them did not increase the traffic. Raising them again to the original rates, after they had been lowered, had the effect of reducing the passenger traffic, but it did not reduce the gross receipts of the Railway. The fares we charge are based on four-pence, three-pence, and two-pence, per mile, for first, second, and third class. Now the rates in England are, as near as possible, three-pence, two-pence, and a penny respectively; and considering that wages and other expenses are three times as high here as they are in England, if we were to charge in proportion, our rates should be nine-pence, six-pence, and three-pence.

115. *By Mr. Macarthur*: You say raising the fares has had the effect of reducing the number of passengers, but has not reduced the gross returns; how do you account for that? The extra rate has made up for the falling off in the number.

116. Is there not a diminution in the goods traffic? The goods traffic has fluctuated; we have never had it fully developed. In some months it appears to have been very good; in others it has not been so active. However, on the whole, it is on the increase. I do not think the Railway is sufficiently carried into the country to intercept the traffic. Parties who have the means of coming into Sydney with their goods will not stop at so short a distance off. Having brought their teams as far down as Liverpool they prefer to come on rather than send their goods by the Railway, and incur the expense of their transit from the terminus into the town.

117. *By the Chairman*: Has your income gone on increasing on the whole? Yes; it is on the increase gradually.

118. Was it ever retrograding? No; it remained steady for some months.

119. Do you not think you might increase it more by reducing your fares? I think not; I believe, myself, it is not a question of amount of fares, but a question of length of line. I think the fares are remarkably reasonable, compared with the rates of wages ruling in the country. I think it would be injudicious in the Government to reduce them for the sake of any temporary benefit, even if it had the effect of increasing the present income for a time, because I believe these are the rates which will have to be maintained, and will return the largest income when the line comes to be extended sufficiently to secure the traffic.

120. Do you think it would be advisable for the Government to lease the line to any private individual to work it; or, do you think the Government should continue to work it themselves? I believe it will be more to the advantage of the Government to work it themselves. If it were leased we should have no guarantee that the rolling stock would not be destroyed. The object of a lessee would be to make as much out of it as possible, with as little expenditure; and, though it might be apparently advantageous to the Government to lease a line, it would, in the end, I believe, be a decided loss to them.

121. You think the Government would take more care of the machinery than any contractor? I am sure they would. Locomotives require a great deal of looking after.

122. Has Mr. Brady now the entire management of the working of the line? Yes, subject to the control of the Commissioners.

123. *By Mr. Macarthur*: Do you think there would be the same guarantee for the public safety against accidents under individual management, supposing the line were leased, as if it were under a public department? I do not think there would. I think the guarantee would be greater under the Government than under individual management.

124. You have had no accident on the line as yet? We have had no accident since the opening of the line, that is to say, no collision of trains or anything of that kind. There has been no interruption of the running of the trains since the commencement.

125. The only accidents have been to individuals who have trespassed on the line? Yes.

126. *By the Chairman*: Have you any contracts now with Mr. Randle? They are all completed, with the exception of some buildings at Liverpool—some goods sheds. He is bound to maintain the Liverpool line for a twelvemonth after it is opened. We have no other contracts of any importance at all.

127. Then you are not constructing any line at the present time? No, except the Hunter River line. It is almost complete now, but we have not received it over. It is not opened yet.

128. You have settled up your contracts with Mr. Randle, or nearly so? They are nearly all settled.

129. *By Mr. Jones*: Have any contracts been entered into to extend the Hunter River line from where it at present finishes, near East Maitland, on to West Maitland? No.

130. What is the cause of the delay? The plans and surveys have only just been completed. There has been some little difficulty about deciding on the site for the station at West Maitland. I believe we shall get reports in the course of a day or two which will enable us to settle that point; and then we shall be in a position to call upon the Government to allow us to proclaim the line, and get out contracts.

131. Alluding again to the traffic returns between Liverpool and Sydney, how frequently do you make payments into the Treasury? Once a month.

132. Can you inform the Committee whether you now pay into the Treasury, since you took the working of the line into your own hands, a sum equal to that which you paid in when

Mr.

- Mr. Randle had it? We have not paid in so much for the last three months, because we have been putting the whole of the rolling stock into thorough repair, and the expense of doing that has absorbed a large proportion of the receipts. G. K. Mann,  
Esq.
133. Have you paid any sums into the Treasury since the termination of the arrangement with Mr. Randle? I think we paid in last month about £1,400. 26 Feb., 1857.
134. And at the same time did you defray the expenses of managing the line, and of all necessary repairs? Entirely.
135. *By the Chairman:* Then you only pay in the net balance? That is all.
136. The amount the Government receive now is less than the forty-five per cent. on the gross receipts paid to you by Mr. Randle? Yes.
137. Did he pay all expenses? Half the salary of the accountant and station masters was paid by the Government, and some minor expenses besides.
138. Up to this time you have not paid so large a net sum into the Treasury, from the traffic between Liverpool and Sydney, as when Mr. Randle had the line? We have not.
139. Notwithstanding you have had the advantage of the extension to Liverpool, while he had only the twelve and a half miles to Parramatta? It has been from the cause I have stated. I do not think we shall appear at a disadvantage when we compare one year with another. Mr. Randle started with entirely new engines and carriages, and worked the line at a comparatively small expense for repairs. But, of course, these engines—though it is due to Mr. Randle to say they were kept in good condition—require additional repair to put them in the same position as new engines; and we have gone to considerable expense in repairing them.
140. You have defrayed the cost of all these repairs to the engines, permanent way, and buildings, out of the returns from the traffic? Yes.
141. So that whatever sums are paid into the Treasury can be taken as a set-off against the interest on the actual cost of constructing the line? Yes, the net balance is a fair set-off against interest. I believe, myself, that when we come to compare the receipts for twelve months under our own management with those for the twelve months the line was worked by Mr. Randle, we will shew just as good a return as Mr. Randle did. I do not believe it paid Mr. Randle in the first instance; but I think he paid his expenses. Having works in hand, he was enabled to keep the permanent way in repair at a cheaper rate than we can do; but on the whole I do not think he made any money by it.
142. *By Mr. Jones:* What is your charge for a bale of wool from Liverpool to Sydney? It comes under a particular scale: 6d. per ton per mile.
143. Do you charge according to weight or measurement? According to both, in different cases.
144. *By the Chairman:* When will you be prepared to call for tenders for the extension from East to West Maitland? In a week or two, I think.
145. How much have you drawn of the loan of £200,000? I think about £80,000 to £90,000.

## APPENDIX A.

*REPORT and Estimate of Railway Extension for 1857.*

## REPORT:—

- Item 1.—This item provides for the construction of a Railway from Liverpool to Campbelltown, complete, with bridges, viaducts, and permanent way. A single line, stations and sidings, and compensation for land. The permanent way includes rails, sleepers, ballast, and fixing; the line, single-way works.
- „ 2.—This provides for the building of a store on the Sydney station-ground, for the reception and preservation of stock received from England.
- „ 3.—Proper offices not being obtainable, it is thought advisable to place this sum on the Estimates, in order that suitable buildings may be erected.
- „ 4.—Provides for the purchase of additional machinery necessary for the repairs and construction of locomotives, and rolling stock, on the southern lines.
- „ 5.—This provides for the continuation of the excavation and levelling of the station-ground at Sydney, with other incidental works.
- „ 6.—This item provides for the extension of the Railway from Maitland to its intersection of the Wollombi Road.\*
- „ 7.—This provides for a smithy and workshops at Newcastle; for the erection and construction of locomotives and rolling stock for the northern lines.
- „ 8.—This sum is for the commencement of an establishment for repairing and constructing locomotives and rolling stock for the northern line.
- „ 9.—This is for the purchase of spare springs, tyres, tubes, axles, &c.
- „ 10.—This is for the purchase of a pilot engine, and 1 four-wheeled coupled engine for passenger traffic, with 3 second and 3 third-class carriages for the northern lines; 2 four-wheeled coupled passenger engines, with 3 second and 3 third-class carriages for the Sydney line; 2 pattern coal waggons, with 50 sets of springs and iron works; construction of 50 waggons; 2 horse-boxes, with iron work for 12, construction of 6; 2 carriage trucks, fittings for 6 and construction of 3; 1 cattle van, fittings for 6; 1 sheep ditto, fittings for 6, construction of 6.
- Freight, packing and erection of engines.
- „ 11.—This provides for a supply of rails, points, and crossings, for future extension, of a pattern and weight to be decided on.

Item

\* Alteration to a point near Lochinvar.



G. K. Mann, Esq., Item 12.—Secretary's and Engineer's Office Establishment; law expenses, stationery, rent, furniture, and contingent expenses.

26 Feb., 1857. N. B.—These estimates are only approximations, and before any sum is asked from the Government, the Commissioners will furnish a detailed estimate of each item.

## ESTIMATE :—

Item 1.—Twelve miles, at £11,500 per mile	...	...	...	...	£138,000	0	0
" 2.—Store at Sydney Terminus	...	...	...	...	1,500	0	0
" 3.—Office buildings	...	...	...	...	8,000	0	0
" 4.—Additional machinery for workshop at Sydney	...	...	...	...	10,000	0	0
" 5.—Incidental works at Sydney	...	...	...	...	5,000	0	0
" 6.—Extension from West Maitland, eight miles, at £11,500 per mile	...	...	...	...	92,000	0	0
" 7.—Smithy and workshop at Newcastle	...	...	...	...	6,000	0	0
" 8.—Machinery at Newcastle	...	...	...	...	7,500	0	0
" 9.—Materials	...	...	...	...	5,000	0	0
" 10.—Rolling stock, viz.—Pilot engine	...	...	...	...	£1,500	0	0
3 passenger engines, at £1,700 each	...	...	...	...	5,100	0	0
8 second-class carriages, at £250 each	...	...	...	...	2,000	0	0
8 third-class carriages, at £225 each	...	...	...	...	1,800	0	0
2 coal waggons, at £75 each, 50 springs at £20 each, and 50 waggons, at £75 each	...	...	...	...	4,900	0	0
2 horse-boxes, at £150 each, 12 fittings at £25 each, 6 new, at £150 each	...	...	...	...	1,500	0	0
2 carriage trucks, at £90 each, fitting 6, at £25 each, and building 3, at £90 each	...	...	...	...	600	0	0
1 cattle van, at £70, fitting 6, at £25 each, building 3, at £70	...	...	...	...	430	0	0
1 sheep van, at £80, fitting 6, at £25 each, building 3, at £80	...	...	...	...	470	0	0
					18,300	0	0
Freight, package, and erection	...	...	...	...	10,650	0	0
" 11.—Rails, &c.	...	...	...	...	15,000	0	0
" 12.—Establishment	...	...	...	...	12,500	0	0
					329,450	0	0
Contingencies, 10 per cent.	...	...	...	...	32,850	0	0
					£362,300	0	0

## APPENDIX B.

RETURN shewing the Items which compose the sum of £12,500 set down as "Establishment" in the Estimates for 1857.

Chief Commissioner	...	...	...	...	1,200	0	0
Engineer in Chief	...	...	...	...	1,500	0	0
Secretary	...	...	...	...	750	0	0
3 District Engineers, each £750	...	...	...	...	2,250	0	0
2 Assistants, each £500	...	...	...	...	1,000	0	0
3 Draftsmen, each £350	...	...	...	...	1,050	0	0
2 Assistants, each £150	...	...	...	...	300	0	0
Accountant	...	...	...	...	500	0	0
Secretary's Clerk	...	...	...	...	350	0	0
Junior Clerk	...	...	...	...	150	0	0
2 Storekeepers, Sydney and Newcastle, each £200	...	...	...	...	400	0	0
Messenger and Housekeeper	...	...	...	...	170	0	0
Rent	...	...	...	...	400	0	0
Law charges, including fixed salary	...	...	...	...	1,000	0	0
Stationery	...	...	...	...	150	0	0
Furniture	...	...	...	...	200	0	0
Contingencies	...	...	...	...	1,130	0	0
					£12,500	0	0

## MEMO.

The Items charged in the Estimate would be in reduction of this, viz :—

Page 68, Chief Commissioner	...	...	...	...	£1,000	0	0
Page 70, Salaries, &c.	...	...	...	...	7,425	0	0
					8,425	0	0
					£4,075	0	0

## APPENDIX C.

G. K. Mann,  
Esq.  
26 Feb., 1857.

RETURN shewing the Salaries paid to Officers employed in the Collection of Revenue.

Shirley Newdick, Traffic Manager	...	...	...	450	0	0
William Scott, Locomotive Superintendent	...	...	...	300	0	0
Charles Aldrich, Station Master, Sydney	...	...	...	325	0	0
Edward Fielding, " Parramatta	...	...	...	250	0	0
Edward Herald, " Liverpool	...	...	...	250	0	0
Frederick Brown, " Newtown	...	...	...	150	0	0
Daniel Shore, " Ashfield	...	...	...	150	0	0
Frederick Cox, " Burwood	...	...	...	150	0	0
John Higgs, " Homebush	...	...	...	150	0	0
John Middleton, " Fairfield	...	...	...	150	0	0
L. W. Allen, Goods Clerk	...	...	...	200	0	0
				£2,525	0	0

AN ANALYSIS of the Accounts for 3 months, ending 31st December, shews the following to be the cost per train mile run for working the traffic (both passengers and goods.)

Wages to station clerks, porters, enginemen, firemen, guards, and all wages chargeable to revenue, per train mile run	...	...	...	0	3	6½
Materials, firewood, oil, tallow, waste, stationery, and general stores, per train mile run	...	...	...	0	2	2½
Permanent way, repairs and ballasting per train mile run	...	...	...	0	1	5½

The receipts for October, November, and December are						
8s. 4½d. per train mile, or a total of	...	...	...	...	£9,705	2 4
out of which sum there has been paid						
For wages	...	...	...	...	4,116	2 8
Materials and stores	...	...	...	...	2,564	19 3
Permanent way, 13½ miles (Sydney and Parramatta)	...	...	...	...	1,666	6 0
				£8,347	7 11	
The receipts and actual expenditure for 3 months being						
...	...	...	...	...	£1,357	14 5

FRIDAY, 27 FEBRUARY, 1857.

Present:—

MR. BARKER,	MR. HAY,
MR. COWPER,	MR. JONES,
MR. FLOOD,	MR. MACARTHUR,
MR. SUTTOR.	

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

John Whitton, Esq., Engineer-in-Chief of Railways, called in and examined:—

J. Whitton,  
Esq.  
27 Feb., 1857.

- By the Chairman: You are aware, I believe, Mr. Whitton, that the object the Committee have in requesting your attendance this morning is to obtain information respecting the estimate laid before the Assembly—namely, £400,000 for the construction of Railways? Yes.
- You have had an opportunity of examining that estimate? I have not gone into the calculation of the cost of the works. I have certainly had an opportunity of examining the estimate as I see it here, but I have not gone into the detail of each separate amount.
- Take the first item of £138,000—that is the Campbelltown extension of twelve miles, at the rate of £11,500 per mile—have you been over that country? I have.
- Are you able to express any opinion on the probability of that sum covering the cost of the extension? I think it will.
- Do you think it is more than the cost is likely to be? No, not more—but quite sufficient for the purpose.
- Is that opinion formed on a knowledge of the price given for the construction of the Railway to the last contractor, or on the present state of the market, or on both? It is formed on a knowledge of the matter generally, and the prices paid for works in the Colony.
- You are aware, I dare say, that the cost of the Parramatta Line has been objected to on account of its great amount? Yes. I assume you are referring to the line between Parramatta and Liverpool.
- And that cost more than was stated in the first instance. I believe the Council were under the impression that £70,000 or £80,000 would cover the cost, while I believe it really amounted to £126,000? I am not aware that that was the case.
- Perhaps Mr. Brady will be able to give more information on this point? Perhaps so. I have not gone into details, but knowing that the cost would be three times as great here as in England, I have no doubt it can be done for £11,500 per mile.

- J. Whitton,  
Esq.
- 27 Feb., 1857.
10. *By Mr. Barker*: A single line? Yes.
11. *By Mr. Suttor*: But a double line? I am not prepared at present to state what would be the difference in cost between a single and double line.
12. *By the Chairman*: With regard to that particular part of the estimate, have you any suggestions to offer to the Committee? Upon the whole of the estimate?
13. Upon that particular item. Do you think there could be any modification or improvement—that the scale of work is such as you would recommend to be carried on: might reductions be made on that estimate? I think so. On going over the line, I expect to make reductions in the cost of the works.
13. From what you have seen of the cost of works, as hitherto constructed, do you think it necessary in future to adhere to that scale, or could the cost be cheapened? Yes, it could, by taking more pains in laying out the lines. I do not see anything unreasonable in the description of work in the present bridges. I have seen no work of any kind of an expensive character. The right principle, undoubtedly, is to select the shortest line with the least expensive works, and the best gradients; and not, as at Newcastle, carry the line over the highest ground, regardless of works or gradients, for the purpose, I assume, of obtaining a straight line.
14. *By Mr. Jones*: Is the line at Newcastle so taken? Yes.
15. *By the Chairman*: Does that make it better as a line or cheaper in construction? Better as a line and cheaper in construction. I think the same of the Sydney and Parramatta Line.
16. *By Mr. Barker*: Both in direction and gradients? Both in direction and gradients. It is not desirable to go a long way round, unless the works are extremely heavy, or it might be found necessary to increase the length of the line to obtain practicable gradients.
17. *By Mr. Jones*: I am desirous of ascertaining whether you think that estimate of £11,500 per mile will cover not only the cost of the permanent way, and the laying down the lines, but all the incidental works? Yes, I think it will. Compensation for land is a subject I cannot deal with.
18. Leaving that out? Leaving that out, I think the estimate is sufficient.
19. You think it will cover all the incidental works? Yes.
20. *By Mr. Barker*: How many stations is that to include? None between Campbelltown and Liverpool.
21. *By Mr. Jones*: To what do you attribute the difference in the estimated cost of the Liverpool and Campbelltown Line, as compared with the actual cost of the line from Parramatta to Liverpool? The last has double-way works—all is double between Parramatta and Liverpool, except the permanent way. That would account for the difference.
22. Do you think the difference to which you allude would account for an increase of £4,000 per mile, on these eight miles from Parramatta to Liverpool, over the estimated cost per mile of the line from Liverpool to Campbelltown? I do not think it would account for such an increase as that. I was informed that the cost was between £13,000 and £14,000 per mile; and if these figures be correct, the double-way works will account for the increase.
23. Have you examined the line between Parramatta and Liverpool? I have not.
24. You cannot judge, then, of the probabilities of the comparative cost of the two lines? Not positively; I could, however, within a small amount. I think this estimate would cover the cost.
25. That is, would cover the total cost, leaving out compensation for land? I think it would. There might be a sudden increase in wages, but this, of course, we cannot provide against.
26. You speak about the lines hitherto constructed from Newcastle to Maitland, and from Sydney to Parramatta, having been unfavourably selected—do you think better lines could have been selected? I think so.
27. Do you not think a great deal more time ought to have been taken? I cannot speak of the time; I can only say I do not think much judgment has been shewn in the selection of these lines.
28. Do you not think it of importance that, before works are commenced, proper surveys should take place? Yes, certainly.
29. And that no works should be actually commenced until these surveys are completed? Certainly not.
30. It is your belief that all surveys ought to be well a-head? I would never begin the works until everything was completed—surveys, levels, and estimates. I do not see the slightest difficulty of ascertaining, within a small amount (unless in the case of an unexpected increase in the price of labour), what a line will cost. It is merely a matter of care and judgment.
31. *By Mr. Suttor*: You are not aware of the actual cost of the line between Parramatta and Liverpool—the amount of the contract and that paid in compensation? I understood the cost to be between £13,000 and £14,000 a mile.
32. That is the contractor's charge? I do not know the contractor's profits.
33. *By Mr. Flood*: I think you stated, Mr. Whitton, in answer to a question put by the Chairman, that you could see nothing in the works between Sydney and Parramatta that you considered too expensive—what is the Committee to understand by that? I mean that there is nothing of an ornamental character about the line. Indeed, the whole of the works are of a very ordinary character.
34. The whole of the works are of an ordinary description? Yes.
35. Works, in fact, of a most common kind? They are.
36. Then your allusion only applied to the works—that is, that they were not necessarily extravagant, but not to the cost of those works? Yes. I do not know what the cost may have been; on looking over the line I saw no works of an expensive character, or unnecessarily extravagant.

37. The works were of the most common kind? Of the most ordinary kind. There was nothing to account for any extraordinary expense. J. Whitton,  
Esq.
38. Now, as to the cuttings, Mr. Whitton, have you discovered any extraordinary engineering difficulties? My opinion is, that the difficulties were made to obtain curves, where there was no necessity for them, and where they might have had straight lines. I see nothing to account for all the curves. 27 Feb., 1857.
39. The whole line is of the most tortuous description? Yes, very unnecessarily so, and not safe to run over at a high speed.
40. Could you not have a better line from near the viaduct at Iron Cove Bridge? I think so; a better line might have been had altogether. The number of small curves are not at all necessary, and I believe curves of a much better radius could have been had.
41. You see nothing to account for these curves? I do not see anything to account for these curves.
42. Do you know the first and heavy cutting to the line at Newcastle? I think so.
43. Have you examined the country sufficiently to say if that cut could have been avoided altogether? No; but when going over, I thought a better line could have been constructed. You can generally form a correct opinion by walking over a line. I could not see that any attempt had been made to obtain the best line.
44. Have you examined the route at Iron Bark Bridge? I do not know it by that name.
45. *By Mr. Jones*: I wish to say I was in error just now about the cost per mile. I see it is but £14,800 per mile? I understood it was something like that amount.
46. *By Mr. Barker*: You spoke of the necessity of surveying a whole line, taking out the quantities, and ascertaining the cost, before commencing the work? That would depend upon the length of it.
47. In doing that, would you not think it necessary to send some person to take a preliminary survey of the country before sending your staff into the country? If I had a line to lay out, I would go over the country first myself, and take an assistant with me. I would then give directions to have the line levelled, and the necessary plans and sections prepared. If these were not found to be satisfactory, I would go over the country again.
48. If you did not go, you would send a competent person? Yes.
49. Would you not consider that the Railway works, including surveys, would be much better under the Railway Department than the Surveyor General's Department? Certainly. I cannot see why the Surveyor General should take charge of the preliminary surveys and sections for Railway purposes. I do not consider that ordinary surveyors are the proper persons to be employed on this description of work.
50. Much time would be saved by sending a person over these lines? Yes; if some competent person was sent over before the surveys were commenced.
51. *By the Chairman*: Do you mean these surveys should be made in order to see the best lines of Railway? Yes; from Menangle to Goulburn, and from Maitland to Singleton and Murrurundi, and to Windsor, Penrith, and Richmond.
52. You think the construction of surveys ought to be under the same direction as the construction of the Railway afterwards? The preliminary survey is of less consequence than the survey for the permanent works, but both of these should be under the direction of the Engineer.
53. The Railway Commissioners have no control, I believe, over these surveys? No.
54. You never examined the records of the Sydney Railway Office, to see what steps were taken before the works were commenced? I have not.
55. *By Mr. Macarthur*: Have you examined the surveys of the southern line beyond Campbelltown on to Menangle? I have; and I am now preparing the working plans and sections for that portion between Campbelltown and Menangle.
56. Have you seen any sections? I have seen sections of a portion of the distance. I know of no great difficulties to interfere with the making of a Railway from Menangle to Goulburn.
57. *By the Chairman*: What do you think the highest gradient? I think one in fifty or fifty-five.
58. That is the steepest? I think it is.
59. Do you recollect where that was? I think it was at Picton.
60. *By Mr. Hay*: You have not seen any of the complete sections to Goulburn? I have not.
61. *By Mr. Barker*: You have seen enough to convince you that the cost of the Railway is greater after you leave Menangle than it is from here to Menangle? I think the cost would be greater after leaving Menangle. I have not seen complete sections, only trial sections of a portion of the distance.
62. *By Mr. Hay*: In all these calculations, ought not the nature of the country, with regard to the difficulty of getting materials, to be taken into consideration? That might make a difference either one way or the other.
63. *By the Chairman*: You think the best way to construct the lines is by proceeding as before? No doubt the best mode is by contract, but I think the letting of short contracts is not so satisfactory as the letting of long ones; you get the work done cheaper by long contracts. You have not the same guarantee for the satisfactory completion of the works when let in small contracts that you have by letting them in large ones.
64. Do you think it advisable to keep the contracts in the Colonial market or to take a wider view? I would take a more extended view, and go to the English market. There would be no difficulty in getting money on a guarantee from Government to the contractors for interest on the amount of money invested in the lines, and the amount might be repaid by the Government, in a certain number of years after the completion of the works. I think it possible at the expiration of the time agreed upon for the repayment of the money a premium might be required by the contractor in addition to the interest; but this would of course be matter of arrangement.

- J. Whitton, Esq.  
27 Feb., 1857.
- arrangement. If more satisfactory to the Government it might be repaid by instalments, in ten, fifteen, or twenty years.
65. Previous to this you would have the surveys in a complete state? Yes; the surveys made, and the facts ascertained as to the facilities for getting materials, and every information that a man would require in embarking his capital in works of this kind.
66. You would not wait for the construction of these small pieces of line before you could go to England with larger contracts? No, I would not; I would go on with the works for these short lines, and in the mean time have the plans and sections prepared for the larger contracts.
67. You mentioned borings. Now, would it not be difficult in making such borings to satisfy the English contractor? Not at all; I would have a number of borings taken where required, and I have no doubt the information obtained would be perfectly satisfactory. The ordinary mode is to give this information, and the contractor satisfies himself as to its accuracy.
68. That is difficult. How could a man 16,000 miles off do that? The borings must be carefully taken and guaranteed to him.
69. *By Mr. Flood:* I suppose you have known contracts taken in England for works to be performed on the Continent? Repeatedly.
70. In what way do you propose to convey the necessary information regarding these contracts to the people of England—would you have plans and sections? Yes; and by some one going over to the contractors in England, fully prepared to give them every necessary information.
71. I suppose you intend to send duplicates of the plans as well as sections? Yes.
72. Is it usual to have the plans lithographed? It is not usual.
73. It would not facilitate the matter to have them lithographed? I think not.
74. You consider it would be necessary to send some one to England with plans, who could give any necessary information not contained in the documents? Yes; I think it necessary to send some one to England, not alone to give information, but with power to make contracts, the amount of such contracts being, of course, limited by the Government.
75. For the contractors to furnish their own labour and every thing connected with the Railroad? Every thing.
76. And it may turn out that by this way the Colony may save a large amount for the importation of labour—the contractor having to import the labour himself? Yes.
77. Are you aware that the country imported labour for the purpose of carrying out these works? I have heard so.
78. The importation of labour would be taken into consideration by the contractor in England? I have no doubt it would.
79. *By Mr. Barker:* In agreeing with contractors in England would they also undertake to keep it in repair for a year afterwards? I have no doubt they would take all the line, make it, and keep it in repair for twelve months or two years, if necessary.
80. Including the rolling stock? Including the rolling stock. Sir Morton Peto and Co. found the rolling stock for the Canadian lines.
81. Seeing your views are in favor of throwing the contracts open, what length of time do you think it would take with the staff now in the country to get up 100 miles in such a way as to send it home? I cannot tell exactly, but it would not take a long time.
82. Do you know the surveyors we have here? I only know the assistants I brought myself, except one or two that were in the Railway Office when I came; I know no others.
83. You know we have Sappers and Miners here? I do. While on the subject of Railways, I think there is one thing which should be mentioned, namely, the question of gauge.
84. *By the Chairman:* That is a most important question—what suggestions have you to offer? I only wish to mention the difference of gauges in South Australia, Victoria, and New South Wales.
85. There is a great difference in these gauges? Yes. I have heard that in South Australia it is five feet six; in Victoria it is five feet three; and, in New South Wales, four feet eight inches and a-half. If you ever do join, you will find a great inconvenience from these differences of gauge. The Oxford and Worcester is a mixed gauge line, and I know the difficulties and the cost. If you should ever send passengers from here to South Australia you will be forced to have two changes of carriages. But this would be trifling compared with the expense and trouble attending the changing of goods from one gauge to the other.
86. *By Mr. Macarthur:* Which gauge do you recommend? I recommend the five feet three inches gauge. That is the best gauge; the most comfortable for passenger traffic is the broad or seven feet gauge; but I think it unnecessarily large.
87. What gauge is this? The Irish gauge is five feet three inches. It is not used in England at all; the seven feet gauge is the English broad gauge.
88. What gauge is the Canadian? Five feet six.
89. *By Mr. Barker:* What would become of the stock if you altered the gauge? You might work it all up. You could lay down a mixed gauge between Parramatta and Sydney, and work it up.
90. *By the Chairman:* Could you alter the rolling stock? Yes, you might. It would be difficult to alter it here; in England it is a matter that would be easily accomplished.
91. *By Mr. Macarthur:* When you speak of the curve in the Parramatta and Sydney Line as objectionable, do you take into consideration the much greater wear and tear? It is objectionable in many ways. There is more wear and tear, while, so far as I can see, there was no necessity for such curves.
92. The working expenses of the line are greatly increased thereby? Yes.
93. *By Mr. Flood:* And there is, at all times, greater danger? There is, at all times, greater danger. It is a general assumption that you can run trains safely on a curve at the same number of miles per hour as there are chains in the radius of the curve. There are sharper

- sharper curves on other lines, because they have been compelled to adopt them; but they should never be used when not absolutely necessary. In England it is often done to avoid property, which is, in some cases, extravagantly expensive.
94. *By Mr. Suttor*: You have not had an opportunity of seeing the proposed Windsor Line—the line from Parramatta to the Hawkesbury? That is the Windsor and Richmond Line; I saw sections the other day, and observed nothing very unfavourable.
95. *By the Chairman*: Rather favourable, is it not? Yes.
96. *By Mr. Suttor*: Could you give the Committee any idea of the cost of tunnelling through the Lapstone Hill, a mountain about a mile and a quarter? It depends on a number of things—principally on what its formation is. It may be sand or it may be granite.
97. Supposing it to be sandstone? The cost of tunnelling varies from about £40 per yard up to £120. It is impossible to tell exactly. You may have quantities of water, or very bad material to get through, which may considerably increase the cost.
98. *By Mr. Barker*: Quicksands, for instance? Yes. Lower lias shale is very difficult to get through. The district between Windsor and Bathurst, however, is a very poor one, and not worth the construction of a Railway through it. Would it not be better to make a line between Goulburn and Bathurst?
99. *By Mr. Jones*: I think you said the cost of tunnelling is from £40 to £120 per yard, so that £80 may be taken as the average? Yes, understanding, of course, that the expense would be three times as much here as at home.
100. That would be £140,000 per mile? Yes, and you must multiply that by three.
101. That would be half-a-million for a mile of tunnelling? Yes.
102. *By Mr. Suttor*: What is your opinion then of this hill—would you recommend a stationary engine? Not unless there is a great amount of traffic.
103. I will tell you there is a great forest of timber, inexhaustible, in fact, in the neighbourhood, and it is thought that if there were a stationary engine, saw mills might be set up at the same place? There could be no objection if the traffic of the place would justify the cost.
104. When a gradient, say of one in twenty, could be had, do you think it necessary to have a stationary engine at a place where saw mills could be established? The gradient of one in twenty would be too steep for a locomotive, and if there be much traffic, a stationary engine would be more economical.
105. With all these difficulties in the western route, do you not think that a cheap line—something of a tramway—could be laid down, when the road was not fit for a locomotive? I have previously given my opinion on tramways, and I am quite convinced of the impossibility of using locomotives on such gradients as one in twenty.
106. What would you advise the inhabitants to do then: burn down their houses and leave it, or have a tramway? Is there no other way?
107. *By Mr. Hay*: The question might be put to Mr. Whitton in this manner:—Supposing there is a very rich district, where a large amount of traffic would come, and supposing there are no other means of communicating with that country,—do you then recommend that you should make through such a country a tramway or a turnpike road? Where it is impossible to obtain a locomotive line, I would make a good macadamised road in preference to a tramway. If there be much traffic, and all the weight coming up hill, a stationary engine and tramway might be used with advantage.
108. *By Mr. Suttor*: But the weight would be both ways? If the incline be too great for an ordinary turnpike road, you will be compelled to have a tramway and stationary engine.
109. *By Mr. Flood*: One question, which I think ought to be put, is with respect to the works. I wish to know if your attention has been called to the general character of the works, as stated to be of an ordinary kind. Are the materials and labour of good quality—that is, are they (after being used twelve months) in good condition? All appear so; but on this subject I am preparing a report. I may, however, say, that I found the permanent way in a most improper and unsatisfactory condition, and it is not in that state in which a first class line ought to be.
110. *By Mr. Jones*: Which line? The Sydney and Parramatta.
111. *By Mr. Flood*: Do you mean it is not sufficiently ballasted? Yes; but there are many other deficiencies besides that of ballast.
112. You have no buildings, or very few, on the Newcastle line? None, I think, but the Gate House at Hexham.
113. Is that a brick building, built in a marsh? Yes.
114. *By the Chairman*: When you say the permanent way is not in a proper condition, may I ask you to what you allude? I allude to the ballasting, rails, and drainage. The rail is a patent, and it was the intention of the patentee that they should be laid without sleepers.
115. If the original design with these rails was that there should be no sleepers, why were they put? Because I do not think you could travel over the line with safety without sleepers. The patent, in fact, was a failure.
116. And is not now used? Mr. Brunell has used it, but I believe he has now given it up.
117. Did you not recommend this rail to be taken up? Not exactly recommend it to be taken up; I said it would take itself up. I recommended that the necessary renewals should be made with a different section of rail.
118. Objection has been made to these sleepers, because the saplings from which they were made were of immature growth? I have heard no complaints; those I have seen appear to be in good order.
119. *By Mr. Jones*: At what do you estimate the probable cost of putting the permanent way in good condition? It was only yesterday that I went over it. I intend to report upon it, and will then state the cost.
120. How long is it since it was taken out of Mr. Randle's hands? Last September, the 26th.

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121. *By the Chairman*: What is the next item on that estimate? £1,500 for a store at the Sydney Terminus.
122. Is that pressing? I think so. You ought to have a store-room, and a store-keeper—the stores not to be charged against revenue, when ordered, but when issued. The stores ought to represent capital. Otherwise you may charge to revenue £1,500 worth of stores in one month, which probably might not be used in six or eight months.
123. There is no building at present erected that can be used for the purpose? No.
124. *By Mr. Barker*: No part of the present store-house or warehouse? No; you require a building expressly for it.
125. *By the Chairman*: Would you erect it at the Sydney Terminus? Yes.
126. This store-house would not be for the construction, but the management of the stores? This building would be used as a store-room only.
127. Are you prepared to give any opinion as to the probability of that sum of money completing it? I have no doubt that a temporary building, which would answer the purpose, might be erected for this sum. It is difficult, until the line has been open for some time, to ascertain what accommodation is required for the traffic; it is, therefore, better to put up buildings of a temporary character that can easily be removed. On all railways that I know the original arrangements have been considerably altered.
128. Then this might be in the way? It might be in the way.
129. *By Mr. Flood*: You have been using American timber? Yes; it has been used, but not under my direction.
130. Do you find that answer? I do not know of any great quantity of American timber having been used.
131. The present constructions are mostly of American timber? Yes; but they have not been up sufficiently long yet to enable you to judge of the durability of the material. I do not at all approve of wooden buildings. I would only use it for temporary arrangements.
132. *By the Chairman*: What is the next item? For office buildings, £8,000.
133. Do you think that, as the Commissioners have taken offices for six years, that is a matter which presses? The offices are inconvenient, and not large enough. If you intend to carry out works of an extensive kind much larger accommodation will be necessary.
134. Then if these new offices are erected, you propose to sub-let those now in use? Yes. I should not think you would have much difficulty in doing that; at present we are obliged to use very small, close rooms in the attics, and even these are not sufficient for our present requirements.
135. *By Mr. Barker*: Where would you erect the offices? They ought to be at the main station; but then the question is, where the main station will be. I do not know that there is any building at the present station suitable for offices. All the offices should be together.
136. Do you think it pressing for this year? I do.
137. *By the Chairman*: Are you aware if any design for these offices has been executed? I do not know of any design. I have not seen one.
138. What is the amount of that item? £8,000.
139. *By Mr. Macarthur*: Do you think that ought to be sufficient? It depends on what it is intended to do with it—whether it is for the general offices of the station or for temporary accommodation. I should not think of spending £8,000 for temporary accommodation.
140. *By the Chairman*: Having regard to the changes in the Railway Commissioners' Department, and remembering that there is a suggestion to bring the station down into Sydney, do you think it advisable to postpone this? I do. I would not spend £8,000 for temporary offices. I think £8,000 would do more than make offices for the Engineer and Commissioners.
141. What would you propose? I should think we might rent a house.
142. As regards your office, I apprehend it should be out at Redfern, and not where it is? It is extremely inconvenient now. The distance is too far to go backwards and forwards.
143. Might not temporary buildings be put up for you at the station, which could afterwards be used for other purposes? Yes. I would recommend that temporary offices be at once erected at the present terminus.
144. *By Mr. Macarthur*: With reference to bringing the terminus more into the heart of Sydney, do you consider that proposal in accordance with the general interests of the Railway; that is, I apprehend, that we ought to spend our money in extending the Railroad into the country, and if you bring it into the town, will that not be prejudicial to the extension into the country? Yes; assuming you have only a certain amount of money to spend. But you could get money, and I think the Railway ought to come to Hyde Park. As it is, you lose all the traffic to the Glebe, Newtown, Redfern, and other places out there.
145. *By the Chairman*: You think the passenger traffic would pay the outlay? Yes; perhaps not just yet, but it would ultimately; and that would be bringing the station to the centre of the town, where it should be.
146. But in the absence of funds, which would you recommend? I apprehend no absence of funds; but with a deficient capital, you should do that which would do most good and bring most revenue.
147. Looking to the general interests of the country, you think the extension into the country most desirable? Yes, of more importance; the other would be of great consequence, but it is a matter not of immediate necessity. I think, however, that it should be done as soon as possible.
148. What is the next item? Additional machinery for workshops at Sydney—£10,000.
149. Is that necessary? As you extend your Railways further into the country, you will require more engines and more repairs; and you ought to have a shop where a traverser can be erected, for taking engines off their wheels. At present you have only the running shed where the engines go after their work. †
150. You spoke of construction; I apprehend you do not look forward to the construction of locomotives in the present state of the Colony? No; but there are certain repairs which require as much machinery as the actual making of engines.
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151. Practically, then, it is for repairing? It is for repairing and renewing engines.
152. Then you would not put the word construction in? No.
153. *By Mr. Macarthur*: Do you think that, occasionally, when there is not sufficient work for the workmen, they might employ themselves by constructing parts of engines? If there were not sufficient work for the men I would discharge them.
154. But, occasionally, there might be broken time? I think not: I never knew it. At all events, I would not begin making here what I could get much cheaper from England.
155. You do not think it desirable to begin to construct in any way? I do not.
156. *By Mr. Barker*: Is that £10,000 not a large sum, considering the number of tools we have here? No, I think not.
157. *By Mr. Flood*: Who made the estimate? I think Captain Mann. As to the exact figures I cannot speak, but I do not think it is too much if you are to have proper accommodation.
158. *By Mr. Barker*: Is that £10,000 entirely for tools? For machinery, as well as for putting up an erecting shed.
159. *By Mr. Flood*: How many lathes have you? I think only one.
160. Do you require additional ones? No, I think not.
161. *By the Chairman*: You do not know anything about the estimate? I did not make it.
162. *By Mr. Flood*: Who will this machine warehouse be immediately under? It ought to be under the locomotive superintendent.
163. You will employ a number of mechanics? Yes.
164. Have you apprentices? Not at present.
165. Did they not employ apprentices in the mother country? Occasionally they did. Boys are, for many purposes, as useful in these shops as men.
166. *By Mr. Suttor*: Will you have a working engineer to superintend it? Yes; you should have some one accustomed to workshops; he will then know exactly the cost of each description of work.
167. A man who will know if the work is properly done? Yes, certainly.
168. *By Mr. Flood*: In all large workshops in the mother country are apprentices employed? They are employed in the locomotive department in England generally.
169. As the Railways are in the hands of the Government in this Colony, do you think it would be an advantage to employ boys? Yes.
170. *By the Chairman*: That would be a matter that would come under your attention in future? So far as I know, the only power or authority I have is vested in the Commissioner; I can only report to the Commissioner. Great alterations, however, are required in the management of the whole line.
171. *By Mr. Flood*: A boy could be put on the locomotive when of proper age? Yes; he might first serve as stoker, and, after attending to the fires four or five years, would, no doubt, make a very good driver. In many things a boy is more useful than a man.
172. *By Mr. Macarthur*: You think, then, apprentices might be taken with advantage? Yes, I think they might; but before doing this, I would recommend a thorough revision of the whole establishment.
173. As to the working and management? Everything.
174. *By the Chairman*: You have hardly been long enough in the Colony to tender suggestions? Yes, I have.
175. Do you think considerable reductions might be made? Yes.
176. Do you think less than this £10,000 sufficient? That entirely depends on what the Commissioner intends. I do not think £10,000 worth of machinery necessary. According to this paper, "It provides for the purchase of additional machinery necessary for the repairs and construction of locomotives and rolling stock on the southern line."
177. There is nothing about building? Part of the £10,000 should go towards the building.
178. This would be an extension of the workshops you have? Yes.
179. Or I should say rather an addition to them? Yes.
180. What is the next item? The next item is incidental works at Sydney—£5,000. "This provides for the continuation of the excavation and levelling of the station ground at Sydney, with other incidental works."
181. Do you know what that means? I suppose it has reference to sidings; I can only believe it to be that.
182. You are doing nothing with respect to the extension of a branch to Pymont? Nothing.
183. The next item? Extension from West Maitland—eight miles, at £11,500 per mile.
184. Do you think that will cover the cost of it? I do not know; I have only been as far as Maitland.
185. What is the next item? £6,000 for a smithy and workshop at Newcastle.
186. Is that necessary? Workshops are necessary.
187. I suggested yesterday that most of the work could be done here and sent down? The expense of sending down would be great.
188. Do you think it desirable to make it on the same scale as at Sydney? No.
189. *By Mr. Macarthur*: But, as far as possible, to import as much as you can from England? Yes; as far as possible to import from England.
190. *By the Chairman*: Under whose immediate direction are these workshops and machinery? Mr. Brady has charge.
191. Is it between him and the Board that these matters are left—I have heard that in England these works are sometimes too large? They should be under the care of a man who thoroughly understands locomotive details.
192. At present you have no efficient management? Mr. Brady manages.

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193. Have you seen the trial sections at Singleton? I have seen the trial sections from Maitland to Singleton, and I believe the country to be generally favourable.
194. *By Mr. Hay*: Can you gather any idea of what the maximum cost would be? I do not like to give an opinion without data, and in this instance I have nothing upon which I can form an opinion as to the cost.
195. You have no plans to correspond with the eight miles? None I can depend upon. Generally, from the sections I have seen, it appears a favourable country for Railways.
196. You have not the same knowledge of that country as of the country from Liverpool to Campbelltown? No, I have not.
197. Do you think the line has been examined with the same care? I think not.
198. Then, for anything you can say positively yourself, it may cost fifty per cent. beyond the sum named? It might be so, but you must presume that the person giving this estimate has been in possession of correct plans and sections; without this information his estimate would be only a guess.
199. *By the Chairman*: With regard to the £27,000, have you gone through this item. You require a pilot-engine? Yes; the item is for the purchase of engines, coal-waggons, horse-boxes, &c.
200. Is that necessary to be sent for? From my own impression of traffic on the Newcastle Line, I should say not. There is no coal traffic that I know of on the line. I believe the waggons mentioned here are intended to be small ones, and I would have them larger than the ordinary waggons if they were required. But, as far as I know, there is no necessity for coal waggons at all on the Newcastle Line. You require no extra carriages. In fact, I think you have more carriages than you require. I believe you have thirty carriages now, and I do not think, for general use, there is occasion for more than six.
201. Do you require any more carriages for the Sydney Line? I think there are sufficient for the present traffic.
202. Is the pilot-engine necessary for the Newcastle Line? No; I do not see what would be the use of it.
203. This item is unnecessary? So far as carriages are concerned; we have no horse-boxes.
204. Could you not make them here? Yes; but we could get them sent out cheaper from England.
205. But could you wait? No; it would be eight months before you could get them out, and the Newcastle Railway will very likely be opened next month.
206. Would you send for horse-boxes home? I have heard something of the cost of making horse-boxes here, and although you have the wheels and axles, they would cost double the amount for which you could get them sent from England.
207. Freight and all? Yes; the cost here is £200, in England about £100.
208. We might make what we immediately want in the Colony, and send home for the others? Yes; but the cost of making anything here would be very great.
209. You have said something about rails? Yes, for a supply of rails, points, and crossings, £15,000.
210. Have you rails in hand? Perhaps I had better not give an opinion, as I am preparing an elaborate return on the subject.
211. £15,000 spent on rails is well laid out? Yes.
212. Do you think we ought always to have rails on hand? Yes, and if you intend to proceed at once with the proposed extensions, the rails should be ordered immediately.
213. But if you contract? You must not contract for the rails. The Government should find the rails, so as to take advantage of the iron market, which changes considerably.
214. Could we not send home an authority to some one to buy rails when they were at the lowest rate? Yes; but if you let them to a contractor, he will always charge you the highest price.
215. The next item? Secretary's and Engineer's office, &c.—£12,500.
216. You know nothing about that? I know nothing about that.
217. *By Mr. Suttor*: Through a country where it is found impracticable to make a Railway, would you prefer a Macadamized road to the construction of a tramway? Yes, I would; I think it would be found more generally useful. It would not confine the traffic to any particular gauge or vehicle, and would be useful to all the inhabitants.
218. And you would therefore recommend the district to keep up its present roads? Yes.
219. *By Mr. Flood*: Do you know who is at present in occupation of the smithies and other establishments at the south end of the paddocks, near the Church? Mr. Randle.
220. Can you inform us of the terms on which they are held? I cannot.
221. But what quantity of land does he occupy? It may be about two acres. It is usual in contracts of this kind to give the contractor permission to put up workshops on the land purchased for the Railway; but after the contracts are completed, the workshops are removed.
222. Is it necessary to keep up the establishments to which I allude, in order to keep the line between Sydney and Liverpool in repair? No.

TUESDAY, 3 MARCH, 1857.

Present:—

MR. BARKER;	MR. HAY,
MR. COWPER,	MR. JONES,
MR. FLOOD,	MR. MACARTHUR,
MR. SUTTON.	

CHARLES COWPER, ESQUIRE, IN THE CHAIR.

Joseph Brady, Esquire, called in and examined:—

J. Brady,  
Esq.  
3 March, 1857.

1. *By the Chairman:* You are one of the Engineers employed on the Railway? Yes.
2. How long have you been employed on those works? Since 1850.
3. Then you are aware of the proceedings in the earlier progress of the line between Sydney and Parramatta? Yes.
4. Do you know what was done, previous to that line being determined upon, to ascertain the best line between those two towns? A very careful and elaborate survey on a large scale was made by the first Engineer, Mr. Shields. He had the levels and cross sections taken, as is usually done in these cases at home, from which he determined the line.
5. Were you employed at all on that work? Not at all. It was done prior to my arrival in the Colony.
6. But you have had these plans through your hands, and have made designs for the works upon the line? Yes; they are now on record in the office.
7. Were there not a good number of trial surveys on both sides previous to the line being determined on? A great number.
8. And those are also recorded in the Office of the Railway Commissioners? Yes.
9. Are you aware of the principle by which Mr. Shields was guided in laying out that line? I believe the principle he was guided by was extreme economy in earth-works.
10. Do you know why he made such a number of curves, to which objection is now made? He made them under the impression that he would save earth-work by that means.
11. Do you think his estimate was right in that respect? Do you speak as regards the quantity of work?
12. I mean as to the line he finally determined upon being more economical than a straighter line? I do not think it was. The saving made was immaterial.
13. You think it was an error of judgment? I think so. Mr. Wallace altered the line to a great extent when he arrived here.
14. Did he do so at an increased cost? Very little, if any. The character of the works was altered, but I do not think there was any material difference in the quantity of work.
15. *By Mr. Macarthur:* You do not think avoiding the curves would have caused any extra cost? A great portion of the curves that at present exist might have been done away at no greater cost than £5,000; but, as far as those that were straightened were concerned, I do not think there was any material difference in the cost. Mr. Shields was too timid in carrying out his designs. I believe he made curves wherever he could save even £5 in the earth-works; but if he had altered the gradients he might have effected the same thing.
16. By making the gradients a little heavier? If he had made the line straight, it did not follow that he should have preserved the same gradients. He might have made a new set of gradients to suit the new ground he had to go over. When an Engineer is laying out a line of this kind, he has a plan sent to him shewing the levels of the country. He commences from a point, A, to get a point, B, and, having studied the levels, he fixes in his own mind the gradients he will adopt. Having, in the first instance, a centre line, he varies that line laterally to the right or left to save earth-work on those gradients. But, in many of these cases, where he might have to make a line very crooked to effect that purpose, if he laid down the line entirely afresh, with a different series of gradients, he might make it straighter at no greater cost of earth-works.
17. *By Mr. Hay:* You mean to say that when Mr. Shields met with heavy work he endeavoured to avoid it by changes in detail, instead of one sweeping change? Exactly. In many cases, where he had difficulties to contend with, he could have avoided them by altering the level of his railway entirely. For instance, if he had made his line fifty feet above the level of the sea, instead of forty feet, he might have had no more earth-work, and a more direct line. He might have made it higher or lower, as the case might require. If Mr. Shields had been confined between two mountains all the way, and had made these deviations from the line to save expense, the principle would have been quite correct; but as it was he might have entirely changed his line, and effected improvement at the same time.
18. He met his difficulties by changes in detail? In detail entirely. If he had effected a complete change he might have made improvements.
19. *By Mr. Macarthur:* Have you been employed on the survey of the line between Liverpool and Goulburn? Yes; as far as Bargo. I have been as far as Berrima, but I have only actually surveyed as far as Bargo.
20. Are you aware of the existence of any surveys, besides Mr. Shields', previous to your own? Mr. Shields' survey terminated at the Robin Hood Inn, on the Campbelltown Road. His examination beyond that was merely cursory, with a view to make a survey, which he did not carry out.
21. Are you aware that the country between the Robin Hood and the Gap at Mittagong Range had been examined by other surveyors before you went over it? Yes; I had access to all Mr. Shone's plans.
22. You are aware that Mr. Woore made a survey also? Yes. I had not seen his plans at that time, but I have seen them since.
23. Have you seen his report? Yes.

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24. In fact there were two distinct surveys besides your own? There were two distinct surveys before I commenced; one made by Mr. Woore, and the other by Mr. Shone.
25. Mr. Shone's was the eastern line? Yes.
26. And Mr. Woore's may be called the western? Yes; it went through an entirely different tract of country.
27. Your line was between the two? Yes.
28. Is there not some point where all three unite? They all unite at Mittagong Range.
29. The fact is established beyond dispute, that any southern line must pass through Gibraltar Gap? Yes.
30. That is unquestionable? That is unquestionable. The only other difficulty is to get past Razorback.
31. Has there not been a great deal of examination of the country about Razorback? Yes; I surveyed two lines there, the one examined by Mr. Shields, and the other which I laid out myself, by Menangle Ford.
32. I thought you said Mr. Shields did not survey beyond the Robin Hood Inn? No; he made no actual survey, but he examined the country from Sydney to Goulburn, and gave in a report on the whole line. He made complete surveys as far as the Robin Hood, but beyond that he merely examined the country with a view to future survey.
33. *By Mr. Barker:* No levels were taken beyond the Robin Hood? There were some levels taken from the Picton side, to within about two miles of Camden.
34. *By Mr. Macarthur:* Your line differs from Mr. Shields' entirely? Mr. Shields, in going up the country, examined the Razorback Line through Camden, thought very favourably of it, and marked trees along the greater portion of the distance. On his return, he heard from some of the settlers that there was a line to be had by crossing the Stonequarry Creek, near to its junction with the Nepean, and following the bank of that river to Menangle. He examined that line as far as Clifton, but formed such an unfavourable opinion of it that he gave it up. He was much prepossessed in favour of the Razorback line.
35. Will you state to the Committee what is the difference between your line and Mr. Shields'. Perhaps you can also explain to us generally the direction of Mr. Woore's line? I will shew it you on the plan. (*The witness produced the same.*) This is a plan of the country from Liverpool to Bargo, and shews the portion of country which was in dispute, so to speak, as far as the route of the Railway was concerned. The first line surveyed was, I believe, Mr. Woore's, which crossed the Nepean at a very low level, at a place called Shancamore, followed up the Werriberri Creek, through the Oaks, to Picton, and by the head of Bargo River up to Gibraltar Gap. Mr. Shone's line was laid out from the town of Liverpool direct to Campbelltown; from Campbelltown it took the tops of the ridges to within about a mile of Appin, and from there through the estate of Lachlan Vale, crossing the Cataract River, within a mile of its junction with the Nepean; thence through the Park Hall estate, crossing Allen's Creek, about two miles from the Nepean, whice river it crossed between the junctions of the Cordeaux and Bargo Rivers, and thence it joined the southern line at Lupton's Inn. From that point the line is agreed on by all parties as far as Mittagong Gap. Mr. Shields marked out a line from Liverpool, keeping the same direction as Mr. Shone's line, to the Robin Hood Inn; it diverged thence, crossing the southern road, and followed up the Bow-bowing Creek, about a mile north of Badgely Hill, continuing through Molles Mains, and over the Cowpasture Road, about half a mile to the north of its junction with the cross road to Campbelltown. It crossed the Cowpasture River at Kirkham, about a mile below the bridge; at this point the ground is very much subject to floods, and Mr. Shields suggested an alternative line, following round the ranges above Kirkham, and crossing the river about a mile still further down, thereby avoiding the flooded lands. Crossing a small range on the western side of Camden Flat, it followed up the valley of the Hunter's Creek to the main ridge of Razorback, called, I believe, Bunker's Hill; this ridge of Razorback (which is 1,050 feet above the sea) was proposed to be got through by means of a tunnel of three-quarters of a mile in length, on an incline of one in sixty; from this point it continued down Crawford's Creek, through the Abbotsford estate, near Picton, and thence about a mile west of Picton by the head of Myrtle Creek, until it crossed the Bargo River by the ford, proceeding in a direct line until it joined Mr. Shone's at Lupton's Inn. The Menangle line laid out by me diverged from Mr. Shone's line at Campbelltown, follows the general direction of the Menangle Road, and crosses the Cowpasture or Nepean River about half a mile east of the Menangle Ford, thence nearly straight to the estate of Morton Park, and following the spurs of the ranges all the way to Clifton, the estate of the late Mr. Macalister; it then crosses the Stonequarry Creek, at a point where the ledges of rock come within about a hundred feet on each side, at a very good place for a bridge, and where it was proposed to erect one about six years ago, for the southern road, in connexion with the Menangle Road. From the crossing of Stonequarry Creek the Menangle line goes through Bunker's Paddock, and follows up Myrtle Creek, passing Gray's Inn, on the north side of Myrtle's Creek, crossing within a mile of the head of it, and joining Mr. Shields' line at Bargo Ford. Thence it is common with Mr. Shields' line to the Mittagong Gap, and with Mr. Shone's from Lupton's Inn.
36. Will you state what you consider to be the objections to Mr. Shields' and Mr. Shone's lines, and why you prefer the Menangle line to either of them? Mr. Shone's line was laid out in great measure to save distance; by it the distance from Liverpool to Lupton's Inn is thirty-seven miles and a-half. By the Menangle line the distance to the same point is thirty-nine miles and a-half, being a longer distance than Mr. Shone's by two miles. The Razorback line is the same length as the Menangle line. One great objection to Mr. Shone's line is the summit level you have to attain in approaching Appin. At the town of Campbelltown the level of the rails is 212 feet above the sea; and at the top of the ridge at Appin the level would be 647 feet above the sea—a rise of 425 feet in a distance of five miles and a half. The advantages gained by getting to this level are entirely lost in the descent to the Cataract River, which is crossed at an elevation of 438 feet above the sea.
- 37.

37. What is the width of the Cataract River where the line crosses it? It is an immense chasm, the depth from the level of the rails to the bottom of the creek being about 220 feet, and the length of the bridge would be some 500 feet. Another large bridge would be necessary crossing Allen's Creek, two miles further on. This would be 150 feet high, and 400 feet long. A third bridge would be required over the Nepean, which would be 190 feet high, and 500 feet long. From the crossing of the Nepean River, Mr. Shone's line is one continuous ascent for a distance of seven miles. The crossing of the Nepean River is 588 feet above the level of the sea; and the level of the rails at Lupton's Inn is 1249 feet above the sea; the summit level at Gibraltar Gap is 2208 feet above the sea, and the distance from the Stonequarry Creek, in the Menangle line, is 26 miles—the rise in this distance is 1733 feet.

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38. Do you recollect the width of the Nepean at the place where the bridge would be? It is 450 feet. The line, as far as Campbelltown, by Mr. Shone's section, is a very good one, there being no worse gradients on it than one in one hundred. To make the works lighter it might be necessary to introduce some steeper gradients, but they would be of no material consequence, as the lengths would be short. The Razorback, or Shields' line, diverging from Mr. Shone's, at the Robin Hood Inn, at a level of 35 feet above the sea, is nearly a continuous ascent for a distance of eight miles, and crosses the ridge between the waters of George's River and the Nepean, on a level of 374 feet above the sea. The advantages gained by this ascent are entirely lost in the descent of two and three-quarter miles to Camden Flats, to a level of 223 feet above the sea. The line crosses the Camden Flats at a dead level, for a distance of four miles, and then ascends at a gradient of one in sixty for a mile and eighteen chains to a spur of the range between Mount Hunter Creek and the Nepean. From this point the line descends at one in a hundred for about three-quarters of a mile to a level of 291 feet above the sea; it is then level for a mile, and then ascends for four miles on a continuous gradient, varying from one in a hundred for two miles, one in forty for a mile and a quarter, and one in sixty for one mile; the latter is through a tunnel nearly the whole distance, and the level at the higher end is 650 feet above the sea. This is the third summit from Liverpool. From this point there is a descending gradient of one in seventy for one mile and twenty-six chains, down to the flat at Abbotsford. The line is then level for three-quarters of a mile, at a height of 550 feet above the sea. From a line running about north-west through Picton, the entire country ascends to Mittagong Range; and any Railway must commence a series of very steep ascents from this point.

39. *By the Chairman:* Which do you prefer of all these lines? The Menangle line, which diverges from Mr. Shone's line at Campbelltown. It is a very good line as far as Menangle, a distance of about five miles, with no worse gradients than one in seventy, which in execution I have no doubt can be reduced to one in eighty.

40. *By Mr. Barker:* There are no deep cuttings? The cuttings are not very deep. It is average earth-work. From the crossing of the river at Menangle there is a very good average line to Picton, a distance of eleven miles, the worst gradient on which is about one in seventy. It is an undulating line throughout. There is a slight continuous ascent more or less to Picton, crossing the Stonequarry Creek at Picton, 475 feet above the sea, the highest intermediate point being in the Morton Park Estate, at Spaniard's Hill, which is 445 feet. But at this point there has been a deviation proposed which will reduce this level to 420 feet; the line is a continuous undulation from Menangle to Picton, but a perfectly easy line for locomotive power. From Picton the steep country commences the same as in the other lines. From Picton to Mittagong Gap will be a series of inclines, varying from two to four miles in length, which will have to be worked by assistant engines.

41. *By Mr. Macarthur:* I believe there have been some deviations from your original survey between Campbelltown and Myrtle Creek, one by going to Glenlee, and the other in crossing the Stonequarry Creek and ascending thence to Myrtle Creek? They are only lateral deviations.

42. They are deviations which much improve the line? Yes; the line will be better in every respect than it is on this paper.

42. You have no doubt whatever that the Menangle line is the best, supposing the southern line to be carried out? I have no doubt it is the best.

43. *By the Chairman:* And the surveys which have been made since yours confirm that impression? They do.

44. You have seen the estimate of £400,000 for the extension of Railways in 1857, which has been submitted to the Assembly? Yes. (*See Appendix to Mr. Mann's evidence.*)

45. The first item you will find is for the extension of the line from Liverpool to Campbelltown, which is put down at £11,500 per mile—are you at all acquainted with the details of the calculation on which that estimate is founded? Since that calculation was made, a detailed estimate has been prepared, from such plans as we have, which has given every support to that estimate. I believe it is a fair estimate.

46. Have you reason to believe that the works stated opposite this estimate will be carried out for that sum? I think £11,500 a mile will be quite sufficient to complete the line, including stations and everything else.

47. *By Mr. Barker:* Ready to go to work? Ready to go to work.

48. *By Mr. Macarthur:* Do you think there is any probability of contracts being taken on more advantageous terms than they have been hitherto? I think since 1854 there has been a considerable fall in the labor market. It has been almost impossible, during the last five years, to make an estimate on which you could depend, for carrying out any works in the Colony, on account of the great variation in the cost of labor. In 1851, when the Concord contract was in progress, the wages of laborers were about three shillings a day; and in 1854, when the works of the Sydney Railway were in full progress, carpenters were getting twenty shillings a day, head masons and bricklayers thirty shillings, labourers fourteen shillings, and navvies, who worked piece-work, made from fourteen to eighteen shillings a day. At the present time carpenters are getting from twelve to fourteen shillings

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shillings a day, working long time; masons and bricklayers from twelve to fifteen shillings; labourers from seven to ten shillings; and navvies, on day work, ten shillings; and at piece-work they cannot make more than from twelve to thirteen shillings. So that I am of opinion that any contract for works let at the present time will be thirty per cent. below the prices at which works have been carried on during the last two years.

49. Do you think it likely there will be more competition than before? I have no doubt there will be a great deal of competition.

50. *By the Chairman*: Do you think there are persons in the Colony with sufficient plant to carry out the works? The only persons who have any quantity of plant are Mr. Randle, on the Sydney Railway, and Mr. Wright, on the Newcastle Line. They have sufficient plant to undertake works for a hundred miles.

51. If tenders were called for the line between Liverpool and Campbelltown, do you think there are other parties who have plant sufficient to enable them to commence and carry on the works? I am not aware of any. Mr. Randle has taken work at Melbourne, and also taken plant, and labourers of all descriptions, from Sydney; and, if there were sufficient inducements, we might get contractors from Melbourne or the neighbouring Colonies. In any case, I have no doubt many builders in Sydney would compete.

52. It would not take long to make a few waggons, and such things? If a contractor took the contract to Campbelltown at the present time, he could not commence the work under two or three months, on the supposition that he would have to provide entirely new plant.

53. *By Mr. Macarthur*: Has Mr. Randle taken away the whole of his plant? No.

54. Has he plant still here sufficient to carry on this contract? Yes, he has an immense plant.

55. *By the Chairman*: You have yourself gone through this estimate? Yes; I prepared it myself.

56. And you are prepared to state, after accurate calculation, that this sum will cover the expense? I believe £11,500 a mile is ample.

57. *By Mr. Barker*: When was this estimate made? I am not very sure of the date when the estimate was made; it may have been six or nine months ago.

58. *By Mr. Macarthur*: Do you think the traffic on the line will be much increased by taking it on to Campbelltown? If we had the line open to Campbelltown it would give us an additional length of twelve miles, which would make our line thirty-four miles long; and that of itself would be sufficient inducement for all persons sending down-produce to stop their drays at Campbelltown, and send it on by Railway. No carrier would think of sending beyond Campbelltown. But, at present, if the roads are in tolerable order, very little advantage is to be gained by a carrier in breaking loading at Liverpool, because of the difficulty he has to contend with in the getting the goods forwarded from the Sydney terminus to the consignees in town. But, if the line had reached Campbelltown, the greater saving of draught for horses and bullocks would be an ample inducement.

59. *By the Chairman*: In the event of the line being extended to Campbelltown, do you think it would be necessary to go to any expense to put the Menangle line of road from Picton in a better state for travelling—have you heard that the approaches to the Menangle Bridge are in a very bad state? I am not aware. I believe the road itself, beyond the bridge, is perfectly good for drays.

60. *By Mr. Macarthur*: To get into a productive country, you would have to go some distance further? Yes; I think we ought to go to Picton, because there we get to the foot of the inclines. From Mittagong Gap it is a continuous descent all the way to Picton; but up to Picton, on this side, we can get a very good locomotive Railway.

61. *By the Chairman*: You stated that the estimate we are now discussing was made during the last six or nine months? It is founded on the present state of the labour market, which I do not think will fall very materially.

62. I thought the tenor of your evidence was, that it has been falling during the last few months? I did not mean to say that. There may be a slight decrease in the price of labor, from men being out of work, but I think wages have been pretty steady lately.

63. *By Mr. Macarthur*: I suppose you have allowed ample margin in your estimate for any probable contingencies? Yes, there is ample provision made, but for a single line only.

64. *By the Chairman*: Your estimate for the Liverpool line was £11,500 a mile, but it has far exceeded that rate? The estimate was for a single line, but the works were commenced for a double line after the estimate had been passed.

65. Then the works were carried out in a different way from that proposed in the original estimate? Yes; the estimate was for a single line only, but though a single line only was laid, all the works were made to suit a double line, in the event of its being found necessary.

66. You think it is not necessary to carry on that principle any further than Liverpool? I do not think it is at all advisable in the present state of the Colony, and the traffic, to make double-way works; but wherever you make a single line, I would recommend that the Electric Telegraph should be laid down, for the sake of preventing collision, and telegraphing for assistance in case of accident. For instance—the other day an engine broke down at Parramatta, and the train that ought to have arrived at nine, did not arrive till eleven. I was waiting for it, and finding it was behind time, took out an engine on the other line of rails to see what was the matter, and brought up the train. Now, if there had been a Telegraph on the Railway, it would have been the duty of the Parramatta Station Master to have telegraphed for an engine, and that would have saved an hour, or, perhaps, an hour and a half.

67. *By Mr. Macarthur*: You think a single line is not safe without a Telegraph? No; it is not, without a Telegraph of some sort. For instance—in the case I have mentioned, if the engine had broken down between Liverpool and Parramatta, where it is a single line, I would not have ventured to have gone on the line with an engine until some person could have communicated on horseback; but as it was on the double line, we went down on the

other

other line of rails. That is the great advantage of a double line. If a train breaks down, or any other cause of stoppage occurs, you can still work a single line on one line of rails.

68. Are you in a position to state to the Committee whether, in your opinion, a line beyond Campbelltown, as far as Pieton, could be executed at the same average as the line from Liverpool to Campbelltown, or at a somewhat higher average? The line from Campbelltown to Pieton would be rather heavy. There would be three or four heavy bridges on it, and the earth-works would be of a heavier class than those on the Campbelltown line. The cost of the line would, therefore, be much higher.

69. *By Mr. Hay*: You speak of the line from Menangle to Pieton? Yes. Up to the river you may say the cost would be £11,500 a mile—the same as the Campbelltown line.

70. How much do you think it would be beyond that? I have not had an opportunity of forming a correct estimate, but I should say, casually, about £15,000 a mile.

71. Including the bridges? Including everything; a similar estimate in every respect to that for the Campbelltown line.

72. Have you completed the plans for that portion of the Railway between Campbelltown and Menangle? There have been plans completed. Mr. Whitton has had detailed surveys made for the line from Campbelltown to Menangle, which give a very favourable section of the line. I have no doubt the line can be made at the same rate as the line from Liverpool to Campbelltown.

73. *By the Chairman*: Is everything prepared, so that the line can be proclaimed, and the contract taken? The plans are so far forward that at the present moment we could call for contracts from Liverpool to Campbelltown; but from Campbelltown the line might be completed as a contingency on that contract at a schedule of prices, or it could be contracted for afterwards. I have no doubt, however, that at a very short notice, the plans of the whole length could be prepared for a contract—say in about six weeks.

74. How long ought a contractor to be in completing the line from Liverpool to Menangle? Twelve months would be ample time to allow.

75. Do you anticipate the probability of having to stop for rails? There are none in the Colony.

76. Has not an order gone Home for a supply? For only a portion; perhaps enough for five miles. But that quantity would be sufficient to supply a contractor as fast as his contract could be carried on, until we could get a further supply from England. We could get rails out quite time enough to complete the line within twelve months.

77. *By Mr. Flood*: Does that apply to contractors who do not possess the necessary amount of plant? No, to persons possessing appliances; but persons not having plant could not put men on at once, and would consequently take a longer time.

78. Do you think it would be fair to the public to bind the contractor to finish the line in twelve months? If you anticipate that such persons would compete, you might add a couple of months to the time.

79. I think you stated it would take three months for a contractor who had no plant, to prepare sufficient to carry on this line? It would probably take him that time to get sufficient plant together for the whole line; but if his time was limited, by making a push, he ought to have sufficient plant in six or eight weeks to go to work on a portion of the line. Any person having plant, or buying it at once, ought to finish the line in twelve months; but a person having no plant should be allowed three additional months to make up.

80. Do you know of any facilities that were granted to Mr. Randle, when he commenced on the Sydney Railway, either in the shape of money or plant? No; he made the first wheelbarrow himself.

81. Are you aware what was the mode of payment to Mr. Randle when he commenced? The mode of payment to Mr. Randle when he commenced, and up to the last, was entirely by means of advances on works completed and in progress.

82. No moneys were advanced to him for works not executed? I am not aware of any advance having been made to him for any other purpose than for works executed, or actually in progress of execution; if it was so, it was a thing I was not cognizant of. But I believe plant, the property of the Railway Company, was lying on their hands, and they made it a part of their bargain with Mr. Randle that he should purchase it, giving him time to pay for it.

83. Were the advances made to him weekly or fortnightly, or how were they made? Principally weekly.

84. In that case it would not require large capital to carry on railway works? If a contractor has plant he has capital. If he has no plant, he must find the capital to make it. The plant that Mr. Randle had given over to him was not one-tenth sufficient to carry on the works.

85. That plant was advanced to him? It was sold to him by the Railway Company.

86. Did he pay for it at once, or was the price of it deducted from the moneys due to him for works executed? An arrangement was made by which he paid for it in a certain period by instalments.

87. Then, in point of fact, it was advanced to him? He did not want it. He was building waggons at the time.

88. *By Mr. Macarthur*: Do you mean that it was rather a convenience to the Company—to get rid of it—yes.

89. What was the value of this plant? The total amount—including wooden rails, which were great rubbish, a few waggons, a few wheelbarrows, and a few planks—was £1129.

90. *By Mr. Flood*: Had Mr. Randle performed any work for the Company previous to this plant being handed over to him? He had.

91. Do you recollect to what extent? I do not.

92. You stated that when he purchased the plant it was of no use to him? No, I did not. I said he had made arrangements for building his own plant. It was an assistance to him.

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What I meant was, that for every waggon he got then he had to build ten others, in order to carry on the work.

93. *By Mr. Macarthur*: He could have done without this plant? He could.

94. *By Mr. Flood*: You stated that navvies could earn some twelve or thirteen shillings a-day at piece-work; do you employ any navvies at piece-work on any part of the line? At present we have no navvies employed, excepting those keeping the permanent way in repair.

95. Do you know what they receive per yard for the earth-work? I am not aware what they receive at the present time.

96. Then your remarks were intended to apply to the men employed in keeping the permanent works in repair? No, there was no permanent way to keep in repair at that time. When I say permanent way, I mean the rails we are now running upon, the repair of which is a current expense. When I spoke of navvies making fifteen to eighteen shillings a-day, I meant men with pick and shovel getting earth out of a hill.

97. Working by the yard? Yes.

98. What do they receive per yard? It depends on the bargain the contractor makes with them. Suppose there is a hill to get through, ground is generally broken by day-work, but afterwards the men are set to work by the piece. It is a fact that day-work is twenty to forty per cent. dearer than piece-work; and it is a matter of economy to make the men do it by the yard.

99. You do not know how much they get per yard? No, I do not recollect. If the men find their own shovels and picks it makes a difference.

100. *By Mr. Macarthur*: In your estimate you have assumed some rate per yard? Of course, we assume a certain rate per yard; but that includes all charges—labor, tools, superintendence and all.

101. *By Mr. Hoy*: You assume a rate at which you can get the work contracted for, including the contractor's profit? Of course we must include a profit.

102. *By the Chairman*: That does not indicate the navvie's price? No.

103. Did you bear in mind, in giving your former answer, that this estimate for the line to Campbelltown includes the rails? Yes, it includes all the iron.

104. These rails have yet to be ordered from England? A great portion of them. There are some coming out which have been ordered for sidings, and may be made available for the extension to Campbelltown.

105. You know nothing about the northern line? Nothing at all of the details. I know it casually; I have been on the Hunter.

106. Have you ever been over the country between the extension to West Maitland and the interior? No.

107. The second item in this estimate for Railways, generally, is £1,500 for a store at the Sydney Terminus—do you know anything of that item? Yes.

108. Is that given from actual calculation, or is it a guess? It is a guess, but it will come within £50 of what it will actually cost.

109. You believe it could be done for £1,500? Yes. It is merely a store to hold grease, oil, tallow, springs, iron, and so on; that would otherwise be lying in the open air.

110. Do you know anything of the item of £8,000 for Office buildings? I believe it was contemplated to build offices at the Sydney Terminus; but I do not know much about the estimate so far as that item is concerned.

111. Was this estimate intended to provide offices for the Board, or only Engineer's offices? By the explanation in the estimate, it is evidently meant to provide offices for the Railway Department generally.

112. Would not the offices now rented answer for a few years? That depends on the extent to which you are likely to carry on works. If you intend to carry on Railways extensively, large surveys will be necessary, and consequently there must be a large staff of assistants, who, of course, will require a great deal of room to prepare the plans.

113. Up to the present time the surveys have been carried on through the Surveyor General's Office? Entirely.

114. Ought these offices to be at the Terminus? Wherever the principal station is, there the offices ought to be.

115. Have you heard that it is contemplated to carry the Railway right into Sydney? I have.

116. Would it not therefore be desirable to abstain from building offices until that question is decided? If it is at all likely that the Railway will be carried into Sydney, I think the building of offices should be delayed. The offices ought to form a portion of the terminal building.

117. Have you ever considered the question of bringing the Railway into Sydney? I have had many conversations with different people about it.

118. Have you arrived at any conclusion in your own mind—do you think it necessary to bring it in at present? Not for the present, but in a few years it will be desirable, and almost necessary, to extend it more into the heart of Sydney. However, if it be deferred for some years it may involve a vast outlay in compensation for the various buildings that will have to be destroyed.

119. You do not think the branch to Pyrmont will be sufficient? If completed in accordance with the original design it will be ample.

120. Why then do you think it will be necessary to extend the other Terminus into Sydney? Chiefly as a passenger line. The goods line ought to communicate with the shipping.

121. Do you think the Pyrmont Branch will be sufficient for that? If it were completed it would be amply sufficient. It is proposed to carry out a pier, opposite the Steam Navigation Company's Wharf to about eighteen or twenty feet of water, so that we could take the loading to the ship's side. At the same time it is proposed to build stores on the Harris' estate, where we have a large portion of ground reserved for that purpose.

122. *By Mr. Hay*: You would then become storekeepers on a large scale? We must store the goods intended for shipment. Goods do not go direct on board ship. Wherever the goods' station may be we should have a number of large sheds for the storage of goods; and these sheds would be rented by the public. Very likely a carrier would rent one of these sheds, bring his goods over our line, and keep them till the ship was ready to receive.
123. Do you think it would be advisable to erect stores sufficient to contain all the goods sent by the Railway until they were ready for shipment? That depends on the part of Sydney in which you fix the goods' station. If the Darling Harbour branch be completed, it will be necessary to build a large number of stores on the station ground; but on the other hand, if the line is carried through Sydney, to the Circular Quay, it would communicate with the stores at present existing, by means of sidings, and the goods contained in the Railway waggons could be thrown into the stores.
124. Then, with regard to the up-country traffic, do you suppose it practicable to take the larger portion of the goods from the ships to the Railway stores? If the line is made alongside the wharf I do not see any difficulty.
125. Would you not require immense storage room? If we had a line of communication with the Circular Quay the goods would be stored in the usual way. On the Darling Harbour branch we would find it to our advantage to have extensive stores, for which we could charge a rent.
126. Would you have bonded stores? Yes.
127. *By the Chairman*: Would the extension of the wharf at Darling Harbour cost a large sum of money? It would cost a considerable sum.
128. As much as bringing the line down Pitt-street, as has been suggested? No. I am not prepared to say how much it would cost, but the line is completed to the level of high water, and it only requires extension for about a quarter of a mile along that level.
129. Is that proposed to be a wooden viaduct, or a more permanent structure? It would be an ordinary timber pier. That was the design proposed by Mr. Wallace. A certain portion of land belonging to the Harris Estate was proclaimed as being required for the Railway, and it was supposed that the water in Darling Harbour would be of sufficient depth off that land to admit of shipping coming up; but since that time the harbour has been continually silting up, and there is now much less depth of water—I should think two feet less. There is therefore no alternative but to carry the line into deep water.
130. Is the process of silting up still going on? Yes; there is no scour to keep it clear; it is all dead water in Darling Harbour.
131. Do you know anything of this item for additional machinery for workshops at Sydney—are you favorable to the idea of constructing locomotives in the Colony, or would you reduce it to a repairing establishment? We must construct them more or less, but they are manufactured in England. We would import the materials in a manufactured state, and erect the engines; that is the technical term. After getting out all the working parts separately, we require what we call an erecting shop to put them together.
132. That does not mean the manufacturing of an engine? Not at all.
133. Do you require the sum stated here? Making engines in Sydney was spoken of some time ago, and I believe a portion of this sum was intended to provide additional machinery; but the machinery we have at present in the Colony, on the Sydney Railway, is nearly sufficient for all our requirements for the next five years. We would require, for an erecting shop, an overhead traversing crane, and some more machines, perhaps one or two more lathes, but nothing to the extent of £10,000; but, building the shop itself would cost, probably, £4,000, and clearing the ground and making sidings to it, perhaps, £2,000 more. Thus, £6,000 of the £10,000 would be required for the workshop itself. I believe it was contemplated that this estimate should include that, so far as I am aware. I only saw this a few days ago. It should have said an erecting shop and machinery.
134. What place do you now use for putting up the engines when they arrive? The running shed.
135. You want a place expressly for that purpose? Yes.
136. Have you sufficient sheds for covering the carriages you now have there? Quite sufficient.
137. What is the next item? Incidental works at Sydney—£5,000.
138. Do you want as much as £5,000 for incidental works at the terminus? Many requirements will arise for which we cannot give an estimate a year a-head. For instance, we require pumping machinery to raise water to the Sydney Terminus. We have no provision whatever for water at Sydney; and it is not very long since we were carting it from the town.
139. Is not the water laid on to your part of the town? No; our ground is too high, besides, the City Commissioners would not supply us, because they could not spare the water.
140. *By Mr. Flood*: Could you not obtain water by sinking in the Cleveland Paddock? Not in the paddock; there is a constant supply to be obtained below the bridge, but we require machinery to pump it up. We require a contingent amount in the estimate to provide for such things as we cannot foresee.
141. *By the Chairman*: All these matters are determined on by the Board? Yes, the whole of them. Suggestions go in from the Engineer, but no work is carried out without the sanction of the Board.
142. The next three items refer to the Hunter River Railway. You know nothing about them? No. They require the same, or nearly the same, machinery there as we do. And when Railways get extended two hundred miles into the interior, you may add a couple more figures to the end of that. This is barely sufficient for the present requirements.
143. Do you know anything about the next item for carriages and engines, and other rolling stock? There was a discussion about sending Home for some lighter engines. I believe these passenger engines at £1,700 each were to meet that expense.
144. You do not want any more carriages for the Sydney Line? No; but I would recommend

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- mend that some more engines should be got, and that the heavy engines at present in use should be reserved for heavy goods trains. They are too heavy for passenger traffic.
145. They are tearing the line to pieces, are they not? Yes; they cause the maintenance of the permanent way to be much more expensive than it need be.
146. Is that pilot engine for the Newcastle line necessary? I do not exactly understand the item. Any engine may act as a pilot engine. A pilot engine is an engine sometimes run a-head of a train to see that the line is clear.
147. *By Mr. Macarthur:* Do not these heavy engines occasion the loss of vast power, as well as increase the expense of maintaining the line? They are three times as strong as there is any necessity for; but we have had trains of as many as twenty carriages, which have given them quite enough to do. In three days, at the time of Homebush Races, we had about four thousand extra passengers. We require to have heavy engines for such trains.
148. *By the Chairman:* How do you account for your line not being properly ballasted? It was ballasted according to the plan provided. Barlow's patent rails were supposed not to require any great amount of ballasting, but we find that they really require quite as much as any other rails, if not more.
149. You require to be constantly repairing the ballast? We require to be constantly repairing the ballast on all lines, but Barlow's patent rails give us a great deal of trouble in keeping the line in repair.
150. Your experience justifies you in not using them any longer? In utterly condemning them. If it were not for the expense we would have them all taken up.
151. You know nothing about this rolling stock in the estimate? It consists chiefly of carriages for the Hunter River line, and coal waggons.
152. Are coal waggons necessary? If they do not contemplate having any coal traffic they will not be necessary; and, indeed, any parties using the line for coal traffic ought to find their own waggons.
153. Do you think it necessary to import these articles as patterns? I think it desirable to do so.
154. Is there any modification you would suggest on these items? I do not know anything about this estimate, and not knowing the requirements of the Hunter River line, I would rather not give any opinion on it.
155. The next item is for rails, £15,000—what is your opinion about that? I think it desirable we should have a stock of rails on hand for any work that may be determined on.
156. You do not think it too much for the purpose? No; I think if it were a much larger sum it would be very desirable.
157. You do not know anything about the office establishment? Nothing whatever.
158. Have you at all considered the question of tram-roads—by which I mean Railways on a cheaper plan, to be worked by horse-power? The matter was brought under my notice some months ago. Tram-road is a colonial term, but it means simply a light Railway. A tramway proper was merely a pair of rails that would admit of ordinary carts or drays running on them, the flange being on the rail instead of on the wheel. The improvement consisted in putting the flange on the wheel, and substituting for the tram-rail what is called the edge-rail. The edge-rail is now used on all Railways; there is no such thing as a tram-rail used anywhere.
159. The question to which I wish to draw your attention is the comparative advantage of horse power or steam? Many persons in the Colony seem to be under the impression that a horse can draw a load on a Railway where a locomotive engine could not run, and it is constantly spoken of as being desirable, wherever you cannot afford to lay down a locomotive Railway to lay down a horse Railway, or tram-road with very steep gradients, to be worked by horses. Now, I can give you the results, from actual observation, of what a horse can do at different gradients. On a level Railway he will draw five or six tons; on an incline of one in sixty, three tons; and on one in thirty, barely one ton. A horse would have a better chance on a macadamised road, at an incline of one in twenty, than on a Railway of the same steepness. I am satisfied, from observations of the places where the contractor has used horses, that one ton up an incline of one in thirty is as much as a horse can do on a Railway. The draft seems to be entirely against the horse, and the friction is so much less, that the waggons have a tendency to run back. There was a place on the Liverpool Line where the contractor had a Railway laid down, for a short distance, to a sand hole; on it there was an incline of one in twenty, for a short length, and I have seen the horses working very hard to get up a load at all.
160. Then, up an ascent like that from Lamb's Wharf, or from Campbell's Wharf, you believe a horse would have a better chance on a macadamised road? A much better chance. The real question between horse power and locomotive power is the cost of working. Horse power cannot be worked to advantage on a steep gradient; and no line of Railway, with any moderate amount of traffic, could be worked economically by horse power for a greater length than five miles. Light branch lines of from five to twenty miles could be worked to most advantage by means of small tank engines. We use tank engines on main lines, but they are of a heavier class.
161. Then you think it is quite out of the question to adopt lines of fifty or a hundred miles in length, to be worked by horse power? Entirely. Even on branch lines over five miles long, it is cheaper in every respect to work the traffic with tank engines. No Railway contractor would think for one moment of employing horses on greater lengths than two miles, if he could possibly get locomotives.
162. *By Mr. Hay:* On what do you base your calculations? I have made a long Report on the subject, and I am merely giving you the heads of that Report.
163. Do your conclusions result from experiment? Partly from experiment, and partly from calculation.
164. May I ask whether the line on which these experiments were made, was properly ballasted

ballasted, so that a horse could exert his full power? On the Liverpool Railway, to which I have referred, the ballast was of such a description that a horse would have a good footing. It would be a disadvantage in making a horse Railway, that you would have to go to the additional expense of making a macadamised road in the horse track.

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165. *By Mr. Suttor*: I think you stated that a horse would have a much better chance on an ordinary macadamised road than on a rail, at an incline of one in twenty? Not literally, but because he would have the benefit of the road to tack.

166. Of course you assume that the road would be in a good condition? I speak of a road like George-street.

167. From what you have seen of the roads to the interior—say the road between Campbelltown and Goulburn—do you think a horse could draw as much on roads of that description as on a Railway, on the incline you name? Certainly not. The only wonder is, that horses or bullocks can draw at all on such roads.

168. *By the Chairman*: But you would not propose to supersede these roads by a horse Railway? No; I would put them in a good state of repair, until a locomotive Railway could be constructed.

169. *By Mr. Suttor*: Looking at the immense security we have to offer in the Crown Lands of the Colony, would you not recommend that money should be borrowed to any extent, and that the roads should be made properly at once? That is a question of finance, which I would rather not answer.

170. *By Mr. Macarthur*: What do you mean by a light Branch Railway? I mean a Railway for what we call branch traffic.

171. *By the Chairman*: Such a line as would be made from Campbelltown to Camden? Yes; or from Parramatta to Windsor or Penrith. I would call that a branch line, and the traffic would be branch traffic. On a main line we require heavier works, and must provide for running the trains at a moderate rate of speed.

172. *By Mr. Macarthur*: What would be the principal difference in the two kinds of lines? There would be a considerable difference in the weight of the rails, and the gradients might be steeper, and the works lighter.

173. Would there be any saving in the engines? There would be some saving in the engines, but that would not make much difference in the mileage.

174. Have you arrived at any estimate at all of the difference in the cost of the lines? In the County of Cumberland, supposing you take the main line as far as Menangle at a cost of £11,500 a mile—if you make what must be considered a branch line from Parramatta to Windsor, I think, at the outside, £10,000 a mile would be a fair estimate—a difference of £1,500 a mile. I think it might be made at that much less than the other.

175. Have you ever heard, in a shape that would lead you to believe, what was the cost of the macadamized part of George-street? It was something almost incredible. I do not know what it cost; in fact, I would rather not state it; but this I know, that blue metalling laid six inches thick on a road is worth ten shillings a square yard, and for a road thirty feet, or ten yards wide, that would be £5 for every yard forward; 1760 by 5 would give you the rate per mile—nearly £9000 per mile. If the metal was on the spot it would make a material difference, but to bring metal any distance it would cost £9000 a mile.

176. Unless the road were kept properly drained of water it would be liable to great ravages in heavy rains? Very great.

177. Would there not be a difficulty in the present state of the labour market, in the scattered state of the population, and under the circumstances of the Colony generally, in keeping up macadamized roads? Yes, very great difficulty. They would require a large expenditure of labour.

178. *By Mr. Suttor*: Could you work a line for two miles at an incline of one in twenty, to advantage, with a stationary engine? It could not be worked with anything else; there is no alternative.

179. It could be done? Certainly. It could be worked at one in six if necessary. There are coal lines in England on which inclines of one in ten are worked by stationary engines, and for short distances one in six.

180. *By the Chairman*: As regards the question of locomotive or horse power, would you make any difference in the surveys or direction of the lines to be laid down, according as one or the other might be intended to be used? Not the least.

181. You would survey all the lines as if for locomotive Railways? Yes; it should make no difference.

182. Has your attention ever been directly drawn by the Commissioners of Railways to the question of the use of horse power on Railways in this Colony? Some few months ago I had instructions from them to prepare a report on the subject, which report is, I believe, on record in their office.

183. Can you supply the Committee with a copy of that report? I can. (*The Witness handed in the same. Vide Appendix A.*)

184. *By Mr. Macarthur*: Do you know anything about what are termed in America plank roads? I never saw one, but I believe a plank road is nothing more than a series of planks laid down side by side over a swamp. Another kind of road is laid down in longitudinal pieces, with the planks laid transversely.

185. How would it answer to lay down hard-wood timber in logs squared, on the same principle as stones were laid down on the old Commercial Highway from the eastern part of London to the Docks? It would be a great assistance to the draft as doing away with the friction, but it would be very expensive.

186. You would not recommend it? No, not at all.

187. *By the Chairman*: You have had the immediate superintendence of the working of the Sydney and Parramatta line? I have, since the 26th September.

188. Some alteration has been made in the rates for passengers and goods since you have managed

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managed the working of the line? There has been no material alteration in the goods' rates, but the passenger fares have been increased.

189. Do you think the alteration has been attended with a beneficial result? To the revenue it has been beneficial.

190. But the number of passengers has been reduced? Very much reduced. I have a document here which explains it fully. It is a statement of the average daily traffic on the Sydney Railway before the opening of the Liverpool extension, and also since that period. (*The witness handed in the same. Vide Appendix B.*)

191. Do you think, on grounds of general policy or expediency, that the increase of fares has been desirable, apart from the question of revenue? As far as the people are concerned, I should say decidedly not.

192. Do you think if these fares were reduced a larger amount of traffic and a larger amount of revenue would not ultimately be obtained from the line? I doubt it very much. In England, the charges for passengers are at the rates of three-pence, two-pence, and one penny per mile, for first, second, and third class; while our rates are only four-pence, three-pence, and two-pence per mile, respectively, though wages are three times what they are in England, and all other expenses are in proportion. I cannot see why we should carry passengers in this Colony at English rates, when our expenses are three times heavier.

193. Is it not a fact that since the fares were increased omnibuses that were knocked off the Parramatta Road have been put on again? They have, to a small extent, but not sufficiently to compete with the Railway.

194. Are there not several omnibuses on the road now? There are, but I believe only one goes through to Parramatta. Regular business people travel by the Railway as they used to do, but people who are not obliged to travel stay at home more than they used to do when facilities were given for travelling at a cheap rate. As to the goods traffic, we cannot work the line for goods with any sort of economy until we get to Campbelltown, because we have to go to nearly the same expense, though we do not get the same amount of traffic as we shall do.

195. *By Mr. Macarthur*: Might not the greater number of passengers in the earlier period be attributable to the greater novelty? I think not. The traffic was very steady; for five months there was scarcely any variation, except what might be ascribed to wet weather.

196. Has there not, during the last twelve months, been a greater depression generally existing in the Colony than was previously the case? Business has been slack, I believe, and people have not so much money to spend.

197. That may account in some degree for the difference in the number of passengers? It may to some extent. But on Sundays, when the fares were low, we used to have great numbers of mechanics, with their families, who would go out to Burwood, Homebush, and other places, and return in the evening; but now that the fares are raised they will not pay the extra shilling or two it may cost them.

198. *By the Chairman*: What proportion of the traffic do you think has arisen from the Liverpool extension? Not more than a fourth of the passengers go through from Parramatta to Liverpool.

199. Do you think the extension to Liverpool has been beneficial? Yes; it is entirely owing to that that we get any increase to our goods traffic.

200. Is that carrying company going on in connexion with the Railway? Yes; with a little energy I believe it will be a very excellent thing. I think we might get a considerable increase in our goods traffic if there was a slight reduction made in the rates. We have four classes of goods, which are charged at three-pence, four-pence, sixpence, and nine-pence per ton per mile respectively; and I think a slight reduction would more than pay itself by an increased traffic.

201. What reduction would you propose? I did propose two-pence, three-pence, four-pence, and sixpence per ton per mile, for the respective classes of goods; and I further suggested that the parcel scale should be done away, and that all parcels should be forwarded at an uniform rate throughout to Liverpool.

202. *By Mr. Macarthur*: What do you call parcels? Anything under a hundredweight you may say is a parcel. They are generally classified as one quarter, two quarters, three quarters, and one hundredweight; and for three-pence, six-pence, nine-pence, and a shilling, we could carry these very well, and it would be a great boon. What we get for parcels now is of very little consequence.

With reference to the cost of working a Railway in this Colony, I may give a list of the wages paid here as compared with those paid in England in the locomotive department:—

	English Wages.		Wages in New South Wales.								
	s.	d.	s.	d.	s.	d.					
Enginemen, from ... ..	6	0	to	8	0	—	15	0	to	18	0
Firemen ... ..	3	6	to	4	0	—	10	0	to	12	0
Cleaners ... ..	2	6	to	2	8	—	8	6			
Labourers ... ..	2	6	to	2	8	—	8	6	to	9	0
Fitters and Turners ... ..	4	0	to	6	0	—	14	0	to	16	0
Smiths ... ..	4	0	to	6	6	—	14	0			
Strikers ... ..	3	0	to	3	6	—	10	0			
Carpenters ... ..	4	8	to	5	0	—	12	0	to	14	0

## APPENDIX A.

J. Brady,  
Esq.

To the Commissioners of Railways.

REPORT on the Comparative Cost of Haulage by Horse and Steam Power, on a Railway of 50 miles in length, with gradients limited to 1 in 60; Passenger Traffic to be at the rate of 150 Passengers each way, daily; and Goods Traffic, 120 Tons up, and 80 Tons down, per day: viz.—300 Passengers and 200 Tons.

3 March, 1857.

On a careful consideration of the respective merits of Horse and Locomotive Railways, it appears to me that the real question lies in the actual cost of *Haulage*, and not in the first cost of the Railway in either case. With regard to the cost of works, there would be no material difference between those of a cheap Locomotive Line and those of a Horse Railway; for, although lighter rails may be used on the latter, this advantage is nearly balanced by the cost of metalling for the Horse Road. Earthworks, culverts, bridges, and fencing would be the same in both. To assert that steeper gradients might be used on a Horse Railway is a fallacy, because it is found in practice that the effective power of a horse is very materially diminished when employed in drawing loads up even moderate inclines—a horse that will draw a load of from 5 to 6 tons on a level Railway will not pull more than 2 or 3 tons up 1 in 50.

Maintenance of permanent way would be about the same in both cases, as also would be the expense of station arrangements, including all salaries of superintendent, station-masters, porters, police, &c.

## HAULAGE BY LOCOMOTIVE POWER.

The passenger traffic would be worked by two locomotives, in steam daily, each making an up and down trip, equal to 100 miles for each day's work; and as there would be 75 passengers in each train, 3 carriages and a break-van only would be required, weighing together about 22 tons; each passenger train might take 30 tons of goods in 6 waggons, making the weight of the train (exclusive of engine and tender) about 70 tons.

The goods might be worked in one up and one down trip. The up-train, taking 60 tons, in 12 waggons, which, with break-van, would be about 100 tons. The down-train would have only 20 tons of goods and the return empties. As, however, in practice, the traffic would be found to fluctuate, it might be found necessary to run a second goods train, and if four engines, in steam, be allowed, it will be ample.

The following is an estimate of the rolling stock required:—

<i>Rolling Stock.</i>					
6 Engines, at £3,000	...	...	...	...	£18,000 0 0
4 first-class Carriages, at £500	...	...	...	...	2,000 0 0
4 second-class Carriages, at £350	...	...	...	...	1,400 0 0
4 third-class Carriages, at £250	...	...	...	...	1,000 0 0
6 Brake Vans, at £250	...	...	...	...	1,500 0 0
60 Waggons, at £150	...	...	...	...	9,000 0 0
					£32,900 0 0
Sheds for 6 Engines	...	...	...	...	4,000 0 0
Watering arrangements	...	...	...	...	6,000 0 0
Repairing shops...	...	...	...	...	3,000 0 0
					£13,000 0 0
<i>Daily Wages.</i>					
4 Drivers, at 17s.	...	...	...	...	3 8 0
4 Firemen, at 9s.	...	...	...	...	1 16 0
4 Cleaners, at 8s.	...	...	...	...	1 12 0
5 Labourers, at 8s.	...	...	...	...	2 0 0
4 Guards, at 9s....	...	...	...	...	1 16 0
					£10 12 0

This does not include Mechanics, whose wages would be paid out of Repair Fund.

## LOCOMOTIVE LINE.

*Annual Charges on Haulage.*

Interest on first outlay for stock,	£32,900 0 0	
	13,000 0 0	
	£45,900 0 0	
At 5 per cent.	...	2,295 0 0
Repair and renewal fund for rolling stock, £32,900,		
at 10 per cent.	...	3,290 0 0
Repairs to buildings, £13,000, at 3 per cent.	...	390 0 0
4 Engines in steam, at an average daily charge of		
£2 10s. each, for fuel, oil, waste, and tallow;		
4 × 313 days, at £2 10s.	...	3,130 0 0
Wages, 313 days, at £10 12s.	...	3,317 16 0
		£12,422 16 0.

Cost

J. Brady,  
Esq.

3 March, 1857.

Cost of working, exclusive of station charges, maintenance of permanent way, and superintendence, per mile per annum ... .. £240 0 0

#### HAULAGE BY HORSE POWER.

*Passengers* to be conveyed in single carriages, each divided into compartments for classes, to contain 50 or 60 passengers, and to be furnished with a powerful brake. These carriages to be drawn, each by four horses, at a speed of eight to ten miles an hour, including stoppages. Two riders and one brakesman. A guard would be required for each.

Three of these carriages would have to start, daily, from each end, and the single trip would form the day's work. There would thus be required six of these carriages, in constant working.

The journey would be divided into five stages, of ten miles each, and each team (coaching or goods) would make one stage out and home, or twenty miles for the day's work.

The horses required for this service would be 15 teams of four horses—

	or 60 horses	
	reserve 20	„
Total	...	80 „
To each team two riders,	=	30 men
Labourers	...	10
		40
Guards	...	6
Total	...	46 men

#### *Goods Traffic.*

Goods to be conveyed in the ordinary goods waggons, on springs, each waggon weighing three tons, load five tons—gross of each, eight tons.

In goods trains two loaded waggons would be sent, or five empty ones, each train drawn by four horses, at a speed of two miles and a half an hour, including stoppages. There would be one driver and one brakesman to each. The fifty mile journey would occupy twenty hours, or two days of ten hours each; therefore a double set of waggons would be required for the service, because the quantity of goods arriving for transport would have to be two days on the road.

Also, as the up traffic exceeds the down by 40 tons, there would be waggons equivalent to 40 tons of loading, viz. :—8 waggons returned empty for each day's service, and counting this double for the two days' journey would amount to 16 waggons.

Thus the waggons required for the up traffic must be equal to two days' loading or 240 tons, and the waggons for down traffic equal, because there would be the empties to bring back.

Altogether for the working we require waggons for 480 tons.

480	=	96 waggons in work.
5		About 30 loading and unloading.
		24 under repair and in reserve.

Total 150 waggons.

The stock of draught horses required for the waggon service would be as follows,—4 in each team; and as there would be 12 trains despatched daily from each end, we have 12 trains × 5 stages = 60 teams of 4 horses each, 240 horses.

Contingencies.—Reserve and sick. 60

300 horses.

300 horses for the goods traffic.

The men for the goods traffic would be as follows:—

60 drivers.  
48 brakesmen.  
12 laborers.

120 men.

The working of the goods' traffic would be somewhat as follows:—Starting, say on the 1st of the month, with the 120 tons up loading; despatched in 12 trains of 2 waggons, or 10 tons net each. Taking any one of these trains, it would reach its destination on the evening of the 2nd, stand one day unloading and reloading, and start on the return journey on the morning of the 4th, reaching home on the evening of the 5th, one day discharging and reloading, and then be ready for No. 2 trip (up) on the morning of the 7th, so that one set of waggons of capacity for 120 tons, or 24 waggons, would only make 1 up and 1 down trip in a week. Therefore, we require 24 × 6 = 144 waggons for actual service for the week's work; but, as the return empties would be available without the one day's delay, a less number would suffice, and the preceding estimate of 126 waggons for working would be about the number actually required.

The

The following is an estimate of the stock required.

*Rolling Stock.*

6 large carriages, working	} 12, at £600... ..	£7,200	0	0
6 in reserve				
150 Waggons, at £150		22,500	0	0
		<u>Total...</u>	<u>£29,700</u>	<u>0 0</u>

*Horse Stock.*

380 Horses with harness complete, at £60 each.	£22,800	0	0
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Stabling would be required at each stage for 60 or 70 horses, and the cost of each of these would be, at least, £1,500.

6 Stables, at £1,500	£9,000	0	0
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Thus we have the actual value or cost of the Stock necessary in working by horse traction.

Rolling stock	29,700
Horses and harness	22,800
Stabling	9,000
	<u>£61,500</u>

The daily expenditure for wages would be about as follows:—

Drivers for express, 30, at 10s.	15	0	0
Guards, 6, at 9s.	2	14	0
Labourers, 10, at 8s.	4	0	0
Drivers for goods, 60, at 8s.	24	0	0
Brakesmen, 48, at 8s.	19	4	0
Labourers, 12, at 8s.	4	16	0
	<u>Total...</u>	<u>£69</u>	<u>14 0</u>
	say	£70.	

Forage for 380 horses, at 4s. 6d. per day...	85	10	0 per day.
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HORSE RAILWAY.

*Annual Charges on Haulage.*

Interest on first outlay for stock—£61,500, at 5 per cent.	3,075	0	0
Renewal fund for horses and harness—£22,800, at 20 per cent.	4,560	0	0
Repairs to stabling—£9,000, at 3 per cent.	270	0	0
Repairs and Renewal Fund Rolling Stock—£29,700, at 10 per cent.	2,970	0	0
Forage—365 days, at £57	20,805	0	0
Wages—313 days, at £70	21,910	0	0
	<u>£53,590</u>	<u>0</u>	<u>0</u>

Cost of working—Exclusive of Station charges, maintenance of permanent way, and superintendence, per mile per annum	1,072	0	0
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Thus we have the total cost of Stock for the Locomotive Line	£45,900
And for the Horse Line	£61,500

calculated in both cases for the same service.

The cost of working for 1 year, including interest on outlay, and Renewal Fund:—

Locomotive Line—£12,422 16s. ; or, £240 per mile per annum,

Horse Line—£53,590 ; or £1,072 per mile per annum,

or more than four times greater than the Locomotive line.

In conclusion, I would beg to remark, that wherever there is work for *fifteen* horses on a Railway, the cost of keeping this stock in work, including drivers, forage, &c., would be more than sufficient to keep a Locomotive Engine in steam daily, including all expenses, interest on outlay, and fund for renewal.

JOSEPH BRADY.

11 August, 1856.

## APPENDIX B.

J. Brady,  
Esq.

3 March, 1857.

## STATEMENT of the Average Daily Traffic on the Sydney Railway before the opening of the Liverpool Extension, and also since that period.

PASSENGER FARES.	SYDNEY.						STATIONS.	SYDNEY.					
	Classes.							Classes.					
	1		2		3			1		2		3	
	s.	d.	s.	d.	s.	d.		s.	d.	s.	d.	s.	d.
Sydney.....	...	...	...	...	...	...	Sydney .....	...	...	...	...	...	...
Newtown .....	0	6	0	4	0	3	Newtown .....	0	8	0	6	0	4
Ashfield .....	2	0	1	3	0	9	Ashfield.....	2	0	1	6	1	0
Burwood .....	2	6	1	9	1	0	Burwood .....	2	6	1	9	1	3
Homebush .....	3	0	2	0	1	3	Homebush .....	2	9	2	3	1	6
Parramatta .....	3	6	2	6	1	6	Parramatta.....	4	0	3	0	2	0
							Fairfield .....	6	0	4	6	3	0
							Liverpool .....	7	6	5	6	4	0
3-11d. 2-22d. 1-33d. per mile.							4d. 3d. 2d. per mile.						

RATES OF PASSENGER FARES.	April to August, 1856. Five Months.	October, 1856, to February, 1857. Five Months.
Average number travelling on Sundays .....	1,300	792
" " Weekdays .....	988	790
Total in the five months .....	162,287	123,017
Average daily receipts for passengers .....	£ 67 2 0	£ 81 4 0
" " carriages, &c. ....	3 15 0	4 3 0
" " goods .....	4 7 0	11 9 0
Total daily receipts (average) .....	75 4 0	96 16 0
Total gross receipts for the five months .....	12,001 0 0	14,978 0 0
Average receipts per month.....	2,400 0 0	2,996 0 0
Miles open for traffic .....	13½	22

N. B.—The Liverpool Extension was opened on the 1st of September.

THURSDAY, 5 MARCH, 1857.

Present:—

Mr. BARKER,  
Mr. COWPER,  
Mr. FLOOD,Mr. HAY,  
Mr. JONES,  
Mr. MACARTHUR,

Mr. SUTTON.

CHARLES COWPER, Esquire, IN THE CHAIR.

John Whitton, Esquire, C.E., M. Inst. C.E., Engineer-in-Chief of Railways, called in and further examined:—

J. Whitton,  
Esq.  
3 March, 1857.

1. By the Chairman: With reference to your former examination, are you prepared to state to the Committee your conviction that the line as proposed to be carried out between Liverpool and Campbelltown is the best line that can be obtained? Yes, I think the general direction of the line is the best that we can possibly get; but my own opinion is that there may be some alteration in the character of the works, both in the bridges and earthworks, that will reduce the cost.
2. But there will be no alteration in the line itself? There will be a slight alteration, but not in the general direction of the line; but I intend to alter some of the gradients and to reduce several of the bridges.
3. Then you are prepared to adopt it as your line? Yes.
- 4.

4. *By Mr. Macarthur:* These alterations will occasion a reduction in the cost? I think they will. I have not made a detailed estimate of the line myself—the quantities have been all taken out by Mr. Brady—but from what I have seen of the line myself, I think it is a very fair estimate, and that the alterations I propose to make will reduce the cost.
5. What is your opinion of the line from Campbelltown to Menangle? Between Campbelltown and Menangle the line will be less costly than between Liverpool and Campbelltown.
6. Do you say that from personal examination? Yes; and from plans and sections I have had made of that district.
7. Are your plans sufficiently matured to enable you to proceed with the works on the line from Liverpool to Campbelltown? They are. I have made considerable alteration between Menangle and Campbelltown, by means of which we shall have better gradients than on the line from Liverpool to Campbelltown. It will be in a different direction from the one originally proposed.
8. Are the surveys of that line sufficiently advanced to enable you to enter into contracts for it? They are not. I have a party out now making working surveys of it.
9. *By Mr. Jones:* The surveys between Menangle and Campbelltown are not in the same advanced state as those from Liverpool to Campbelltown? They are not.
10. *By Mr. Barker:* How long will it take to finish them? About a month. To get plans and sections up very carefully requires a great deal of time; and very often spending £100 in a little extra labour in getting them up well will save many thousands in the cost of the line.
11. *By Mr. Jones:* With regard to the northern line, are the surveys from Maitland eight or nine miles northwards sufficiently forward to enable you to decide whether that also is the best line? They are not. There are no plans beyond Maitland that I should like to depend upon for railway works.
12. Then, before you decide on the line to be adopted from Maitland upwards, you will require to make a personal examination of the country, and to have more detailed surveys? I shall.
13. Do you consider yourself to be in a position to ask for a grant of money to carry on the line, until you have made these surveys? From the general nature of the country I can estimate nearly what it will be, but I should be sorry to say that I am in a position to decide which is the best line. I have seen sections beyond Maitland, but not sufficiently in detail to enable me to decide positively which is the best line.
14. Before you determine on the direction of the first eight miles of the line from Maitland to Singleton, would you not require to be in possession of general information as to the character of the line from Maitland to Singleton throughout? Yes.
15. How long would it take your department to acquire that information? If I were to undertake that as a thing urgently required, I could get it done in three weeks or a month, so as to enable me to decide on the best line for eight miles out of Maitland and the general direction of the line beyond that.
16. You will not think of proceeding with the construction of any portion of that line until you have ascertained the character of the country between Maitland and Singleton throughout, and have decided generally on the line to be adopted? I shall not.
17. Can you give any idea how long the completion of the Newcastle line will take—I allude to the extension from Honeysuckle Point to Watt-street, at the Newcastle end; and from the brick kilns near East Maitland to West Maitland, at the other end? That will depend on the number of hands that may be employed. If we employ a great number of hands, and there is no hindrance in getting possession of land, I think in twelve months we might complete both the extension to West Maitland and the extension to Watt-street.
18. Then, substantially, would there be any interference with the progress of the northern line if the money was not voted now for carrying on the line beyond Maitland, seeing that it will take nearly twelve months to complete the portions of the line into Newcastle and West Maitland? If we can have the money ready by the time we are ready with the plans it will not.
19. Supposing that in the course of six months the Government will be in a position to obtain from the Assembly authority to expend money on the extension of the northern line, would the non-granting of the money now cause any delay to its progress? In a month from the present time we should be enabled to get sufficient knowledge of the line to decide, for eight miles beyond Maitland, which is the best direction to take; so that we might have the whole of the works going on at the same time.
20. *By Mr. Barker:* The two works might proceed together? They might proceed together if we had money to go on with them.
21. *By Mr. Jones:* In the present state of your knowledge you cannot give the Committee any distinct assurance as to what the cost of the line north from Maitland will be, until you have made a detailed survey? No.
22. You do not feel yourself in a position to give the same assurance with regard to that line as with regard to the line from Liverpool to Campbelltown or Menangle? No. I know from the general appearance of the country two or three miles beyond Maitland that there will be nothing whatever of difficulty about it; but still I am not in a position to give the same information as with regard to the line from Liverpool to Menangle.
23. *By Mr. Suttor:* Have you seen any sections of the line between Parramatta and Windsor? I have, between Parramatta and Richmond, and Windsor too.
24. If the money were granted for carrying out that line, would the necessary surveys involve any great amount of delay before commencing the works? No. If instructions were given for carrying that line out, the plans could be got ready and contracts entered into in four or five months.
25. If the money were voted for a line over the Hawkesbury, you think it might be commenced very soon. The surveys would not require any great length of time to complete them?

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- them? It would require five months to do them with the whole of the assistance I have in my office.
26. Before you could commence to work upon the line? Yes. I do not like commencing works upon a line until I have got all the detail necessary for the whole of it. It might make a great difference in the disposal of the earthwork whether you have the whole of the plans ready or not
27. Are the sections you have seen of the country in that direction favorable? Very favorable.
28. *By the Chairman*: You mean in an economical point of view? Yes.
29. You have had no control over these surveys as yet? I have not.
30. They have been carried on under the direction of the Surveyor General? Yes.
31. The whole question will be new to you when you get the plans? Yes; but of course they will be of great assistance to me
32. You know nothing of the country yourself? No; but that will not be an important matter, because I can easily go over the country, and ascertain the value of the plans.
33. *By Mr. Jones*: What length of country would these £15,000 worth of rails cover? About seven and a-half miles—including rails, chains, keys, fish-plates, bolts and nuts.
34. *By the Chairman*: Of the sum of £92,000, put down for the line for eight miles beyond West Maitland, what proportion do you estimate will be required for the rails? The rails, including all ironwork, will cost about £2,000 a mile.
35. Even though that money should not be voted now, would it not be desirable to place sufficient funds at the disposal of the Railway Department to enable them to send for the rails? I think it would. The state of the iron market in England might make a great difference in the cost of rails, but I do not know what it is at present; it may be high or it may be low, but still it would be advisable to have the means of procuring the rails if the market should be found to be favorable.
36. *By Mr. Jones*: To send for the rails at once would obviate delay in the execution of the works? It would. You never can be wrong in ordering rails if you get them at a reasonable rate.
37. Do you not think that, instead of voting this sum of £92,000 for the extension from West Maitland for eight miles northward, it would really more promote the rapid extension of Railways if we were to order sufficient rails for double that length, and also rails for the lines from Parramatta to the Hawkesbury, and from Liverpool to Menangle? I think it would, because you would then have sufficient materials in hand to carry on the works vigorously when they are commenced.
38. And in the meantime you could have the surveys advanced, so that by the time Parliament meets again you might be in a position to give the same assurance as you have already given in reference to the Campbelltown line? Yes.
39. *By Mr. Macarthur*: Are there not a great many workpeople now living in tents along the line of Railway to Liverpool? Yes.
40. If the progress of the line from Liverpool to Campbelltown were delayed for any considerable period would they not be apt to leave for Melbourne or other places? If you do not find sufficient employment for them I have no doubt they will leave for other places where there is employment.
41. *By the Chairman*: Have you ever formed any opinion, or have you ever considered the question of how many tons, or hundreds, or thousands of tons of rails, you can get out here within a given time by the shipping—is there not sometimes a difficulty in getting ships to bring out these rails? I never heard of any difficulty. I think you can get them out quite as fast as you will require them. The shipping has increased very much between England and Australia. They bring rails out as ballast, cheaper than almost anything else.
42. *By Mr. Barker*: Do you include the freight in the cost of the rails, when you say it is £2,000 a mile? Yes, I have assumed the freight on the price of the iron.
43. *By Mr. Flood*: Should the Legislature provide the means for the continuation of the line from Liverpool to Menangle, in the first place, from Parramatta to the Hawkesbury, in the second, and from Maitland to Singleton, in the third place—do you contemplate submitting these works, or any portion of them, to the British public for competition? I do not think the length will be sufficient for that purpose. I do not think anything under a hundred miles would be sufficient to induce an English contractor to undertake a contract here.
44. *By the Chairman*: You think the means in the country would enable contractors to take up these short lines? I do not think the means in the country would enable contractors to take up the lines at the same price as the English contractors would. There are very few persons here who have capital or plant sufficient to undertake large works of this character. I think it is entirely in the hands of one or two men, who may charge almost what they please.
45. *By Mr. Flood*: Is it your intention to take any steps to attract the attention of the British public to the works we have been speaking of? No; I do not think the length of the line is sufficient to induce a contractor of large means to bring out his plant to the Colony. The only man whose coming would be of any use is a man who has large capital and large plant, and unless you have a long line that he can contract for, such a man will not embark in the undertaking. I believe Mr. Randle and his partner, Mr. Wright, are the only men who have got any plant in the Colony. I think we might get the works done much cheaper by having more competition.
46. Can you suggest to the Committee any other mode than those already suggested to create competition for these works in the Colony? I do not know of any means in the Colony. Before you can create competition, you must have men in a position to undertake these works; and I do not think there are any men in a position to undertake them—that is to say, in a position to get together the necessary amount of plant to prosecute them successfully,  
except

except Mr. Wright and Mr. Randle. You might get tenders from many men, but I do not think they are in a position to carry the works out. J. Whitton, Esq.

47. Are you aware whether it is the fact or not, that the gentlemen you have named as contractors possessed no great means when they commenced the works on the Railway? I have no personal knowledge of the matter, but I have heard they had not. I hope you will not understand me to recommend that they are the only men you should have to do the works. On the contrary, I should like to see more competition. I have no doubt they can execute as good works as any other men; but I do not think you ought to let the works remain in the hands of one or two individuals, if it can be avoided. 5 March, 1837.

48. Would you consider it advisable on the part of the Government to possess a considerable quantity of plant in their own hands, so that they might furnish it to contractors with limited means, either upon loan or by selling it to them? I would not recommend it.

49. Then it would follow, as a necessary consequence, that the contractors you have named would be the only persons who could compete for and carry on these works? I do not know of any others in the Colony who are in possession of sufficient means; but I do not think it would be advisable for the Government to begin furnishing appliances. You would never get the plant properly taken care of, nor the works so well executed; for no doubt, if any dispute arose as to the quality of the work, they would say it was on account of your not furnishing sufficient plant, or plant of an inferior kind. The only way I see of getting the works better executed, and at a cheaper rate, is by having contracts for more extended lengths—say a hundred miles at a time. There would be no necessity for completing the whole hundred miles in a very short time; the work might be done at a given rate; but I think you must extend your contracts to lines of a hundred miles in length, in order to ensure a sufficient amount of competition.

50. *By the Chairman:* It would take some time before you could be in a sufficient state of preparation with your surveys, to admit of contracts being taken for lines of that extent? Yes. Of course you could not guarantee any length of line to a contractor unless you have all the plans and sections complete; but I have no doubt that there are contractors in England who would both find the plant and find the money too—the amount to be repaid in a certain number of years.

51. *By Mr. Flood:* Do you believe that any inducement could be held out to the principal contractors in England to send competent persons to inspect the proposed lines, with a view of taking contracts for them? The only inducement you could hold out would be to pay them for all reasonable expenses, and to pay for the time they were here, provided they did not get the contracts. Many of the large contractors—Sir Morton Peto, Brassey, the Tredwells, and others—have men whom they do send continually to take contracts for them; and I have no doubt an arrangement might be made with them to send some one out for the purpose here.

52. *By Mr. Barker:* Before they could form their judgment you would have to get all your surveys and levels completed? Decidedly.

53. *By Mr. Jones:* Can you tell me what the cost of maintaining and renewing the permanent way, rolling stock, and necessary Railway buildings, is found to be at Home, on an average of years? The average cost of maintaining the permanent way on railways at Home, including the renewal of rails and sleepers, and every thing, in fact, necessary for maintaining it in good condition, is about four-pence per train-mile, that is, four-pence for every mile run by the trains of all kinds. I believe your line between Sydney and Parramatta is costing you, now, about two shillings and four-pence per train mile. I have a list here of the cost per train-mile of a great number of the lines in England, and I find the average is about four-pence.

54. You estimate the cost of the same item on the Sydney and Parramatta Line at two shillings and four-pence? That is the actual, not the estimated, cost.

55. Seven times the amount of the average cost at Home? Yes. I think it ought to be three times, because the rate of wages is about three times more than it is in England.

56. *By the Chairman:* Still it is more than double what it ought to be? Yes.

57. How do you account for that? In the first place, from bad management; in the next, from the line being deficiently ballasted, which can be remedied; and the other reason, which I do not think of so much importance, is the bad description of permanent way. The rails are a bad patent. The rail being hollow the water collects under it, and keeps it continually wet—you cannot dry it. If I had the charge of it, and were allowed to employ the men I thought proper, I would not increase the salaries of the line at all, but I think I could reduce the cost £2,000 a year.

58. Is it not intended to give you the management of the line? At present, so far as I understand my position, I am the Engineer of the Commissioners, and it will rest with the Commissioners to adopt, or not, my recommendations. I could get men out from England, and, I am certain, I could make a saving of £2,000 a year. I would not increase the salaries, but I would have it much more efficiently worked than it is now. I think the amount of a man's salary is of little importance, in proportion to the value of his services, if he understands his business, and does his duty well. In England there has been a change in these matters. At one time, when they had an enormous capital to run to, and no one to look after them, of course they were very reckless in the management; but the system generally adopted now is, that each man has his own department, and, of course, he is anxious to reduce the cost of that department, and to raise its efficiency as high as possible.

59. *By Mr. Flood:* The men you speak of getting from England are men you could place the most implicit confidence in? They are.

60. And they would leave their present services to come to you? I have no doubt they would. It is not necessary to have an engineer over the permanent way. I would only have an Inspector—a practical man.

61. *By the Chairman:* When you speak of not having an engineer over the permanent way, you mean that an engineer is not required in Mr. Brady's position? You must have some one

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- one to look after the locomotives, but you ought to have a man accustomed to their management, and who knows quite well what are the duties of the men, and how they ought to perform them.
62. You would call him locomotive superintendent? Yes.
63. Mr. Brady fills that situation at present? Yes; but he has been brought up as a Civil Engineer, and not as a Mechanical Engineer.
64. *By Mr. Flood:* A superior mechanic would perform the duty, I suppose? I think you ought to have a man who really knows the work, and knows the requirements of the department—a man who would be able to give out the stores, and to say whether they were economically expended or not. I think an immense saving might probably be effected in looking after the stores; the men ought to be restricted in the use of them, and not be allowed to take whatever they think proper.
65. *By Mr. Jones:* Can you say what was the number of miles run by the trains between Sydney and Parramatta during the last year, or any given period? The total number of miles run during the three months, ending December 31st, was 23,144.
66. And the actual cost of maintaining the permanent way was two shillings and four-pence per mile? Yes.
67. *By the Chairman:* You do not include the repairs of the locomotives? In the two shillings and four-pence I include nothing but the actual cost of the permanent way.
68. *By Mr. Jones:* My object was to ascertain the total expense of maintaining the whole Railway in an efficient state, including the renewal of rails, the renewal of rolling stock, repairs of buildings, and all costs and charges incidental to the working of the Railway? Are you alluding to the Sydney and Parramatta line, or to lines in England?
69. Both? The lines in England include the renewal of the rails, the renewal of sleepers, repairs to bridges, tunnels, culverts, station buildings, and everything connected with the maintenance of the permanent way; and the cost is four-pence per train mile. In fact, everything belonging to the engineering department is included in the terms *way* and *works*. But this one between Sydney and Parramatta does not include the renewal of rails; it only includes repairing the permanent way, and ballasting; but I may say that ballasting is a very small item in the expenditure.
70. Then there will have to be added to that the cost of renewing the rails? Renewal of rails, renewal of sleepers, and, in fact, renewals generally, and repairs to station buildings, and bridges.
71. *By the Chairman:* Are the wheels much torn to pieces by the curves? No, not to any great extent. Some of them were in a bad state when I first came, but they have been turned up, and new tires put upon them. There is a tendency of that kind, of course, in running round sharp curves.
72. *By Mr. Jones:* Can you furnish the Committee with any estimate of the probable cost of the other services necessary for maintaining the line in working order? I have taken them all out—the cost of wages, and the cost of stores, such as oil, tallow, fuel, &c.; but I do not like to go into the figures now without having the documents before me. That information I prepared for a Report, which I have addressed to the Commissioners of Railways.
73. *By the Chairman:* Would there be any objection to appending a copy of that report to your evidence? I can have no objection whatever.
74. Then, perhaps, you will have the goodness to do so? Certainly. (*Vide Appendix A.*)
75. *By Mr. Jones:* What is your idea of the proper mode of maintaining a Railway—do you conceive that it is requisite, from time to time, that there should be a sufficient renewal of the permanent way, buildings, rolling stock, and everything else connected with the Railway, to put the whole affair in as good a condition at one time as another? Yes; all renewals during any half-year, or year, or whatever period the accounts are made up to, should be included in the cost of maintaining the Railway for that term.
76. So that, under that system, in each year the Railway would be in as good order as in any previous year? It would. It would not be of so much importance, perhaps, to carry out that principle strictly here, the Government being the sole owner of all the Railways; but in England, where the shareholders are continually changing, it might be a very serious thing if all the expenses of maintaining the Railway and rolling stock in good order for a long period were thrown into one half-year, because it would affect the dividends.
77. Before you arrive at any profit, besides defraying the ordinary official expenses, you would have to ascertain in fact what has been the cost of maintaining the line? Yes; no accounts are complete accounts unless you do so.
78. Before any dividend, so to speak, is declared, these expenses ought to be provided for? Yes. I think all Railways, before they declare a dividend of any kind, ought to pay for all renewals required during each half-year.
79. *By Mr. Barker:* In fact, you would take a certain per centage of the net gains and set it aside as a sinking fund, to replace the stock as it deteriorates? I should object to a sinking fund. I think the proper way is to make the repairs as they are required, and to pay for them out of the half-year's revenue. If you keep all your stock in proper repair, it is as good at the end of the year as it was at the beginning; because, although it may be depreciated in value, it is not deteriorated. Just as when you buy a private carriage and use it—say for a fortnight—it is depreciated, because you have used it, but it is as good as it was before, in point of fact.
80. *By Mr. Jones:* According to your computation, there has been expended a sum equal to £10,800 per annum, in maintaining the permanent way on the Sydney Railway—what proportion does that sum bear to the receipts? The receipts during October, November, and December, were £9,705 2s. 4d., and the expenses for the same period for permanent way, £1,666 6s. But I should mention, that the line between Sydney and Liverpool is not maintained entirely by the Commissioners; they only maintain the line between Parramatta and Sydney.

Sydney. The line from Parramatta to Liverpool is being maintained by Mr. Randle for twelve months, under his contract for its construction. Therefore the expense of maintaining that portion is not included in these figures; but assuming that the cost per mile between Parramatta and Liverpool to be the same as between Sydney and Parramatta, the total cost for permanent way would be £2,715 9s., leaving the receipts in excess of the expenditure only £308 11s 5d.

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81. *By Mr. Barker:* Do you think the line between Liverpool and Parramatta will ever cost so much, in proportion to its length, to keep it up, as that between Parramatta and Sydney? I do not think it will; but the line between Sydney and Parramatta is costing nearly double what it ought to cost. I have not examined that line sufficiently to be able to give a positive opinion, but that I shall do before the contract is given up.

82. From the nature of the rail, and the construction altogether, would you not think it likely to be much less expensive? I think so.

83. *By the Chairman:* But you are of opinion that very considerable reductions may be made in the cost of managing the line? I have no doubt of it, very great reductions indeed.

84. *By Mr. Barker:* Will you state to the Committee, with reference to a practice which is sometimes introduced of adding ten per cent., for contingencies, on to certain prices previously demanded for contracts, whether it is customary to adhere to that practice in England? The ten per cent. is generally added by all contractors as a contingency; that is, they assume they have got the total quantity of the works throughout, but that some contingency may arise which may require the expenditure of several hundreds more than they have calculated on. They often put on ten per cent. to cover contingencies of that sort. For instance, level crossings and bridges might be required in places where they are not expected to be wanted, and the contractor is bound by his contract, if a guaranteed one, to put them in.

85. But supposing he has only to perform exactly his contract as specified, would it be necessary to add ten per cent.? If you let the works to the contractor on a schedule of prices, he is only entitled to the amount stated; but if you let him the work with all the contingencies about it, I think it is only reasonable to give him some per centage to cover the risk.

#### APPENDIX A.

*Railway Office, Sydney,  
11 February, 1857.*

DEAR SIR,

In compliance with your request, I beg to lay before you the following Report on the present cost of working and maintaining the Sydney and Liverpool Railway; and also append my suggestions for the future management.

##### *Permanent Way.*

The length of line maintained by the Commissioners is (from Sydney to Parramatta)  $13\frac{1}{2}$  miles, and consists of a double line of way laid on the narrow gauge of 4 feet  $8\frac{1}{2}$  in., with Barlow's rails, 75 lbs. per yard. This portion is let to Thomas Hollis, for £114 per week, or at the rate of nearly £440 per mile per annum; making a total of £5,928 a-year. This contract is for labour only to permanent way, and does not include the maintenance of works, stations, or ballasting.

From Parramatta to Liverpool—a length of  $8\frac{1}{2}$  miles—the permanent way consists of a single line only, laid on transverse sleepers, with the "H" rail (75 lbs. per yard), and is maintained by Mr. Randle under his contract for the construction of the works on that district.

##### *Locomotive Department—Rolling Stock.*

The Commissioners have four mixed traffic engines by Stephenson and Co., with inside cylinders 16 inches diameter and 24 inches stroke, leading and driving wheels, 5 feet 6 inches diameter, coupled; trailing wheels, 3 feet 9 inches diameter; boiler, 4 feet diameter, 10 feet long, with brass tubes, 236 in number, and 2 inches outside diameter. The tenders for these engines have Indiarubber springs and buffers, and are on six wheels 3 feet 9 inches diameter, and capable of holding 2000 gallons of water. I have not the weight of these engines and tenders, but I believe they will be about 40 tons each.

They have also one ballast engine, built by Hawthorne and Co., with inside cylinders 14 inches diameter, and 22 inches stroke; leading and driving wheels (coupled), 4 feet 6 inches diameter; trailing wheels, 3 feet 6 inches diameter, with 136 tubes (brass)  $1\frac{1}{2}$  inch diameter. The tender for this engine has steel springs, and is on wheels 3 feet 6 inches diameter, and capable of holding 900 gallons.

The carriages have been built by Messrs. Wright and Co. of Birmingham, and consist of the following:—

- 6 first-class; three compartments, holding 18 passengers; weight, when empty, 5 tons.
- 2 coupé carriages; two compartments, to hold 6 passengers each, and one to hold 4 passengers; weight 5 tons.
- 12 second-class carriages, with seats for 40 passengers in each; weight  $4\frac{1}{2}$  tons.
- 12 third-class carriages; to hold 36 passengers; weight 4 tons.
- 3 passenger luggage vans; weight  $4\frac{1}{2}$  tons.
- 3 goods train break vans; weight  $4\frac{1}{2}$  tons.
- 4 horse boxes; one built by Wright and Company of Birmingham, and three by Mr. Randle on waggon frames; weight  $3\frac{1}{2}$  tons.
- 1 sheep van; weight 4 tons.
- 1 meat ditty; originally a cattle waggon, but altered by the Commissioners.

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2 carriage trucks, by Wright and Co., weight  $2\frac{3}{4}$  tons.  
19 low-sided goods waggons, weight 3 tons each.  
17 open high-sided waggons, ditto,  $3\frac{1}{2}$  ditto do.  
10 Covered waggons, ditto,  $3\frac{3}{4}$  ditto do.

The Commissioners have, therefore—  
5 locomotive engines  
23 carriages, capable of holding 1,052 passengers  
6 luggage vans  
4 horse boxes  
1 sheep van  
1 meat van  
2 carriage trucks  
46 goods waggons

Four of these engines, built by Stephenson and Co., are much larger than necessary for the present traffic of the line, even for the conveyance of goods, but for the passenger traffic, the traffic for which they are chiefly used, their great weight and power render them most objectionable, as engines one half the weight would be quite sufficient to run the ordinary passenger trains, which consist of about six carriages and luggage van.

On an analysis of the accounts for 3 months, ending December 31st, I find the following to be the cost per train mile run, for working the traffic, both passengers and goods:—

Wages to station-clerks, porters, enginemen, firemen, guards, and all wages chargeable to Revenue, per train mile run, 3s. 6 $\frac{1}{2}$ d.

For materials, firewood, oil, tallow, waste, stationery, and general stores, per train mile run, 2s. 2 $\frac{1}{2}$ d.

Permanent way—for repairs and ballasting, per train mile run, 2s. 4d.

The receipts for October, November, and December are 8s. 4 $\frac{1}{2}$ d. per train mile, or a total of £9,705 2s. 4d., out of which sum I find there has been paid for—

Wages	...	...	...	...	...	£4,116	2	8
Materials, stores, &c.	...	...	...	...	...	2,564	19	3
Permanent way—13 $\frac{1}{2}$ miles, Sydney to Parra-						1,666	6	0
matta	...	...	...	...	...			

TOTAL ... £8,347 7 11

The receipts over actual expenditure for the 3 months being £1,357 14s. 5d.

But as that portion of the line between Parramatta and Liverpool is *not* maintained by the Commissioners, the cost for this length must be added to the permanent way charges, and assuming the cost to be at the same rate per mile as between Sydney and Parramatta, the total cost for permanent way would be £2,715 9s., leaving the receipts in excess of the expenditure, only £308 11s. 5d.

The mileage run of the trains during these months I have calculated from the time table, and have made no allowance for shunting or empty running, but have taken the actual train mileage, which is 23,144 miles for all trains.

The expenditure for the last three months has been much beyond what I believe will be a fair average amount for repairs to rolling stock, as two of the engines, I am informed, have undergone very extensive repairs *since* the termination of Mr. Randle's contract for working the line, and these are now in a very good working condition.

The cost of maintaining the permanent way is very heavy, and I have not been able to discover any extraordinary circumstances which can satisfactorily account for so great an expenditure as 2s. 4d. per train mile run for repairs and ballasting only.

The average of many of the principal lines in England for repairs of permanent way, ballasting, renewals of rails and sleepers, repairs to station buildings, and all charges for maintaining way and works, is only 4d. per train mile; and taking the the price of labour in England as one-third that in the Colony, the cost of renewals and repairs to permanent way ought not to exceed from 1s. to 1s. 2d. per train mile.

The bad description of permanent way (Barlow's saddle back rail) and the heavy engines will doubtless account for some portion of this extra cost; but, I think, better management may effect a considerable reduction.

It appears to me very extraordinary that having the weakest possible form of permanent way, the heaviest class of engines should have been procured—engines which the requirements of the traffic do not at all justify, as the smallest would have been sufficient for the traffic of the line, and much more suitable for the permanent way.

#### *Suggestions for the future management and working of the Line.*

The contract entered into with Hollis expires, I believe, on the 20th March next, and had I a proper man to take charge of the line as inspector, I would recommend the Commissioners to take the maintenance into their own hands at once—but, under existing circumstances, probably it would be advisable to see the contractor and endeavour to make an arrangement with him for the repairs of the line at a considerably reduced cost; but should he refuse to do this, I would terminate his contract, and employ the best man that can be had here in the capacity of Permanent Way Inspector.

A complete analysis of the cost of permanent way is absolutely necessary to enable the Commissioners to fully understand the amount of work done, and for what particular purpose the money is being expended.

It is not sufficient to say that a man has been employed upon the permanent way, but it should be known before his wages are paid on what specific work he has been engaged; without

without this, it is utterly impossible to have any check upon the outlay in this branch of expenditure. J. Whitton, Esq.

Proper forms should be provided for this purpose, and a competent person appointed to take charge of these forms, and keep all the accounts in the greatest detail, both for locomotive and permanent way expenditure. 5 March, 1857.

These forms, shewing in detail the men's time employed upon the Railway in every department, should be sent to the Chief Engineer, and the pay lists sent out from his office, certified by him, he being responsible for the accuracy of all accounts connected with the working of the line, and, in fact, for the expenditure.

I propose to make an alteration in the number and duties of the officers at present having the management and working of the line, whose salaries are as under :—

Manager and District Engineer ...	per annum	£750	0	0
Traffic Manager ... ..	"	450	0	0
Foreman to Locomotive Department	"	300	0	0
Clerk ... ..	"	104	0	0
Inspector of Permanent Way. ...	"	250	0	0
		<hr/>		
Total...		£1,854	0	0

I would appoint one man, thoroughly efficient, as a Locomotive Superintendent, and with the present short line, and small traffic, he would also be Traffic Manager; such a person might be had, I have no doubt, for about £800 per annum.

For the permanent way I would have a thoroughly practical man, accustomed both to the maintenance of permanent way, and the construction of all kinds of Railway Works; such a person might be engaged for about £400 a year.

For the purpose of keeping the accounts connected with the working of the line, I would have a man thoroughly efficient, and who has had considerable experience in accounts of this nature; such a person might be obtained for about £400 a year.

The following would be the salaries of the officers I would recommend :—

Locomotive Superintendent and Traffic Manager, per annum...	£800
Inspector of Permanent Way and Works ... ..	£400
Book-keeper, to have charge of Locomotive and Permanent Way accounts ... ..	£400
<hr/>	
Total...	£1,600

This alteration would effect a reduction in salaries of £254 a year.

I have no faith in being able to get the assistants which are requisite in the Colony, and would strongly recommend that they be sent for from England, with an allowance of whatever may be considered reasonable for their passages; as I am thoroughly convinced that by having proper officers appointed for the several duties required, that a great reduction can be made in the working expenses of the Railway.

I am, &c.,

JOHN WHITTON.

To Captain Mann,  
Chief Commissioner of Railways.



1856.

## NEW SOUTH WALES.

**ELECTRIC TELEGRAPH,**

(CORRESPONDENCE RELATIVE THERETO.)

*Ordered by the Legislative Assembly to be Printed, 25 November, 1856.***SCHEDULE**

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## ELECTRIC TELEGRAPH.

No. 1.

THE CIVIL ENGINEER to THE COLONIAL SECRETARY.

No. 129.

Civil Engineer's Office,

Sydney, 29 March, 1854.

SIR,

In obedience to your instructions, I do myself the honor to transmit the accompanying estimate, amounting to two thousand and twenty-seven pounds six shillings, being the probable cost for the completion of ten miles of Electric Telegraph, with the requisite mechanical arrangements, both for index, needle, and alarum, at each terminus.

2. Although the precise description of wire best adapted to the purpose might not be at once procurable in the Colony, it is probable that sufficient of other descriptions might be obtained for connecting the stations.

3. It is also to be anticipated that the necessary instruments would have to be constructed, but as these are of very simple form, no impediment to the formation of a line of Telegraph in this Colony could arise out of this circumstance.

I have, &amp;c.,

THE HONORABLE  
THE COLONIAL SECRETARY.  
&c., &c., &c.

GOTHER K. MANN.

[Enclosure in No. 1.]  
REPORT.

This Estimate is calculated for laying down 10 (ten) miles of Electric Telegraph, viz., one wire for single needle code, and one distinct wire for alarum apparatus, with no intermediate stations, and exclusive of the cost of erecting station-houses at either end.

Item 1.—Provides for the purchase or construction of all the requisite mechanical apparatus at each end of the line.

Item 2.—Provides for the requisite material for setting up the wire along the entire line, the standards or posts being of full strength, and capable of sustaining additional wires should it be found expedient to multiply and extend the effect of the Telegraph at any future time.

Item 3.—Provides for the probable cost for wages for fixing and arranging the foregoing described material.

Item 4.—Survey, plans, supervision, and other incidental charges.

Item 5.—Office furniture.

## ESTIMATE.

Item	£	s.	d.	£	s.	d.
1 To purchase or construction of alarum apparatus (2) at £35 each	70	0	0			
To do. do. of Needle Telegraph apparatus for single code, complete (2) at £30 each	60	0	0			
„ purchase or construction of 4 24-cell Voltaic batteries, at £10 each	40	0	0			
„ purchase or construction of lightning conductors for Station Galvanometers (4) at £5 each	20	0	0			
Cost of Mechanical Apparatus				190	0	0
2 To 260 Standards, 20' x 6' x 6', at £1 each	260	0	0			
„ 50 do Winding Posts, 20' x 8' x 8', at 25s.	62	10	0			
„ 200 lbs. No. 16 copper wire, at 1s. 3/4 lb.	10	0	0			
„ 50 lbs. fine copper wire, at 1s.	2	10	0			
„ 600 earthenware insulators, at 6d.	15	0	0			
„ 100 screw ratchets for Winding Posts, at 10s.	50	0	0			
„ 1 Ton of Lead Piping, at £40	40	0	0			
„ 6 Tons of No. 8 galvanised iron wire, at £40	240	0	0			
„ silk, cotton, varnish, &c.	10	0	0			
Cost of Material				690	0	0
3 To delivering along the line and fixing 310 standards, at 10s.	155	0	0			
„ fixing and arranging wires, &c., viz. :—						
4 men, 60 days, at 9s.	108	0	0			
2 Mechanical Engineers, 60 days, at 15s.	90	0	0			
1 do. do. Foreman, 60 days, at £1	60	0	0			
Cost for Wages				413	0	0
4 To Surveys and Incidental Expenses	250	0	0			
				250	0	0
5 To Fitting and Furniture to two Telegraph Offices, at £150.	300	0	0			
				300	0	0
				1,843	0	0
Contingencies, 1/10				184	6	0
				£2,027	6	0

GOTHER K. MANN,  
Civil Engineer's Office, 28 March, 1854.

£2,027 6 0

No.

## No. 2.

THE COLONIAL SECRETARY to THE CIVIL ENGINEER.

54-2,880.

*Colonial Secretary's Office,  
Sydney, 31 March, 1854.*

SIR,

I have the honor to acknowledge the receipt of your very intelligent letter of the 29th instant, containing an Estimate of the expense of forming an Electric Telegraph between Sydney and the Light House, or any locality within ten miles distance of Sydney.

I have, &amp;c.,

THE CIVIL ENGINEER,  
&c., &c.

C. D. RIDDELL.

## No. 3.

ROBERT TOWNS, ESQ. to THE COLONIAL SECRETARY.

*Melbourne, 1 November, 1855.*

SIR,

I have the honor to hand herewith a communication received from Mr. McGowan, on the subject of Telegraphic communication between Sydney and Melbourne, also between Sydney and Parramatta, which I beg most respectfully to submit for the consideration of His Excellency the Governor General.

I have, &amp;c.,

THE HONORABLE

THE COLONIAL SECRETARY,  
Sydney, New South Wales.

R. TOWNS.

[Enclosure in No. 3.]

*Melbourne, 1 November, 1855.*

DEAR SIR,

Referring to our conversation of Wednesday last, and in compliance with your request that I would afford you some reliable statistical information relative to the cost, &c., of establishing a line of Electric Telegraph between this City and Sydney, I now have the pleasure, after having given the subject my deepest consideration with reference to its practicability in a commercial point of view, to advise you on the points above stated.

1st—Regarding the cost of construction, and the provision of the necessary instruments and batteries. Assuming the distance to be traversed by the line to be, in round numbers, six hundred miles, and that the average cost of construction, as compared with the general cost of constructing the lines already in operation in this Colony, would bear a moderate reduction in favor of the Sydney route, consistent with the change in the price of labor, and the presence of many natural facilities in the interior of this country through which the line would be carried,—I find that the average cost per mile, for the erection of posts, insulators, and wire, would not exceed eighty-five pounds (£85.) It may be proper to state here, that the posts would be formed of the ordinary native timber, mostly of good stringy bark, blue and red gum, the base of each post being slightly charred, and covered with a preservative preparation; in size they would be similar to those in use in this Colony, say twenty-five feet in length, seven to eight inches diameter at the base, tapering to five or six at the top, the base being firmly imbedded in the ground to a depth of five feet, thus allowing the conducting wire to be upheld at a height of twenty feet above the surface; but in portions of dense timber country through which the line might run, advantage would be taken in some instances of the proximity of trees growing on the route, where they could be used as substitutes for posts, by attaching the insulators and wire.

2. The cost of providing the line with suitable instruments, similar to those adopted upon the Victorian lines, would not exceed, for a supply adequate for ten stations or offices, including all requisite battery materials and fittings complete, say one thousand pounds, (£1,000,) and as it would no doubt be very desirable that every expedition should be used in carrying out a work so manifestly of great public importance, it may be gratifying to you to be made aware, that a sufficient supply of all necessary materials have been very recently imported from England, so as to render the possibility of any delay in the speedy completion of the line a matter entirely dependent upon the energy and enterprise of the proprietary.

3. That the line would prove highly profitable, in a commercial sense, I am fully confident, and a brief abstract statement of the maximum cost of establishing, and probable cost of carrying on the working of the line, together with minimum estimate of the revenue to be derived from the transmission of despatches of public and private interest, will, I trust, at once demonstrate the entire feasibility of the undertaking.

Gross

## ELECTRIC TELEGRAPH.

*Gross cost of construction.*

600 miles of line, @ £85 per mile.....	£51,000	0	0
Instruments, &c., for ten stations ...	1,000	0	0
Office furniture and fittings.....	1,000	0	0
Contingencies .....	2,000	0	0
Total.....	£55,000	0	0

*Working expenses, yearly.*

Salary of Superintendent, say.....	£800	0	0
Travelling expenses, ditto .....	200	0	0
Accountant .....	400	0	0
Assistant ditto.....	300	0	0
Two Station Masters, @ £350 .....	700	0	0
Eight ditto 300 .....	2,400	0	0
Two Assistants, ditto 250 .....	500	0	0
Five Line men 200 .....	1,000	0	0
Four Messengers 100 .....	400	0	0
Eight ditto 78 .....	624	0	0
Expenses of maintenance and repairs to line ...	1,000	0	0
Rent of offices .....	2,000	0	0
Light, Fuel, Stationery, &c. ....	1,000	0	0
	£11,324	0	0

4. Supposing the scale of charges for the transmission of messages between Melbourne and Sydney, and between intermediate stations upon the line, to be placed at even a lesser rate than the charges for similar services in England, and estimating the probable business of the line at the lowest reasonable figure, consistent with the large population of, and the existing and rapidly increasing mercantile relations between, the Cities of Sydney and Melbourne, I think you will readily perceive, that even should the anticipated revenue be diminished by one-half, and the working expenditure proportionably increased, still there will remain a fair margin from which we might reasonably expect, as the importance and utility of such a means of communication become thoroughly understood and appreciated, at least, a fair increase upon the estimated revenue during succeeding years.

*Scale of Charges between Melbourne and Sydney.*

For a message not exceeding ten (10) words, exclusive of the address, date, and signature, which are transmitted gratis, say 8s., and for each additional word, (over 10) say 6d.

Between Melbourne and Beechworth, (Ovens Diggings,) and between Sydney and Beechworth, for messages as above, say 5s., and for each additional word, ditto, 3d.

5. The number of messages passing daily between Melbourne and Sydney, would amount, at the lowest estimate, to at least fifty each way. In this estimate I may say that I am much guided by the business at present transmitted by Telegraph between Melbourne and Geelong, which has often exceeded fifty messages daily. A profitable business would also be carried on between Melbourne and Beechworth, as also between Sydney and Beechworth, on account of its interior position upon the flourishing gold field, and the trading interest centred there in connection with both Sydney and Melbourne. Estimating the daily number of messages to and from this point, at say, with Melbourne twenty each way, and with Sydney the same, and admitting that no revenue, or only a trifling amount, were to be derived from other intermediate stations upon the route, we have the following statement, assuming all the despatches transmitted to be at the minimum rates, although in actual practice despatches are generally in excess of the limit.

*Statement of Revenue.*

Fifty messages daily between Melbourne & Sydney, @ 8s....	£22	10	0
Fifty ditto ditto Sydney and Melbourne 8s....	22	10	0
Twenty ditto ditto Melbourne and Beechworth 5s ...	5	0	0
Twenty ditto ditto Beechworth and Melbourne 5s....	5	0	0
Twenty ditto ditto Sydney and Beechworth 5s....	5	0	0
Twenty ditto ditto Beechworth and Sydney 5s....	5	0	0
Total daily revenue.....	£65	0	0

Making all due allowance for occasional interruptions from accidental causes, and that no business would be transacted upon Sundays, the line should be in full working order at least three hundred (300) days of the year, thus affording a total yearly revenue of £19,500.

*Abstract statement.*

RECEIPTS.		EXPENDITURE.	
Total yearly revenue for the transmission of messages ...	19,500	Salaries and working expenses for the year .....	11,324
		Dividend at 12 per cent. on £55,000 .....	6,600
		Surplus Fund .....	1,576
	£19,500		£19,500

6. Should these statements appear to you as being at all over drawn, I can only assure you, that, during an experience of eight years in most branches of the conducting and management of Electric Telegraphs, I have witnessed even more satisfactory results than those I have now submitted. You will also observe, that no account has been taken of the amount which would be derived from the transmission of despatches for the Press, the charges upon which would undoubtedly form one item of considerable importance upon a line of such magnitude.

7. With reference to the probable time which the construction of the Line would occupy, I am confident in the belief that the entire work might readily be completed, in good working order, within the space of one year from the date of commencement; and, in this respect, I speak entirely from my own practical knowledge of the speed and certainty with which such works may be pushed forward by energetic hands, under the guidance of competent contractors.

8. As it might possibly be desirable, before advancing the immediate construction of the proposed Line between Sydney and Melbourne, that a shorter one should be constructed, to connect some two points within the boundaries of your Colony, in order more fully to elucidate the method of constructing and working our Electric Telegraph, I would beg to suggest the advisability of establishing a short line, say between Sydney and Parramatta, the total cost of which, with instruments, &c., &c, for two stations, would not exceed £1,500, and which might be placed in complete operation within three months, as there are competent workmen at present here who would possibly be willing to proceed to your city, in order to undertake the work at once.

In conclusion, allow me to add, that any further information with reference to this subject which you may feel desirous to obtain, I shall be most happy to furnish you with, either on personal application or by letter.

I have, &c.,  
SAM. W. MCGOWAN,  
Superintendent of the  
Electric Telegraph.

Capt. Robert Towns,  
&c., &c., &c.,  
Sydney.

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No. 4.

THE COLONIAL SECRETARY to ROBERT TOWNS, ESQ.

*Colonial Secretary's Office,  
Sydney, 13 November, 1855.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 1st instant, forwarding one from Mr. McGowan, Superintendent of the Electric Telegraph at Melbourne, on the subject of telegraphic communication between Sydney and Melbourne, and between Sydney and Parramatta, and to convey to you the thanks of His Excellency the Governor General for this communication.

I have, &c.,  
W. ELYARD.

ROBERT TOWNS, ESQ.

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No. 5.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER FOR RAILWAYS.

*Colonial Secretary's Office,  
Sydney, 13 November, 1855.*

SIR,

I am directed by His Excellency the Governor General to request, that the Commissioners for Railways will place themselves in communication with the Agent for one of the Electric Telegraph Companies, with a view of establishing a line to Parramatta, and eventually along all the lines of Railroad.

2. It will be impossible, His Excellency observes, to work a combined system of Trunk and Branch Lines without the assistance of the Electric Telegraph.

I have, &c.,  
W. ELYARD.

THE CHIEF COMMISSIONER  
FOR RAILWAYS.

## No. 6.

THE CHIEF COMMISSIONER FOR RAILWAYS to THE COLONIAL SECRETARY.

*Railway Office,  
Sydney, 28 November, 1855.*

SIR,

In acknowledging the receipt of your letter, No. 112, requesting the Railway Commissioners to report whether they were prepared to offer any suggestions for the establishment of an Electric Telegraph in connexion with the lines of Railway now being constructed; I do myself the honor to state, for the information of His Excellency the Governor General, that the Commissioners consider that the lines of Railways now constructing can be advantageously worked for some time to come without the aid of an Electric Telegraph.

2. That lines of overhead telegraphic wires, if carried through the uncleared bush, would be constantly liable to interruption, not only from falling timber and bush fires, but also from theft, and as recent improvements have been made in the Magnetic Telegraph, the Commissioners would suggest that application should be made to the Railway Department of the Board of Trade as to the most approved systems to be adopted.

3. Adverting to your letters, Nos. 104-5, the Commissioners, under these circumstances, considered it best to delay communicating with the Telegraphic Companies until they had further instructions from His Excellency.

4. The enclosure, with Capt. Towns' letter, is herewith returned.

I have, &c.,

GOTHER K. MANN,  
Chief Commissioner.

THE HONORABLE

THE COLONIAL SECRETARY.

&c, &c, &c.

## No. 7.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER FOR RAILWAYS.

*Colonial Secretary's Office,  
Sydney, 5 December, 1855.*

SIR,

Having submitted to the Governor General your letter of the 28th ultimo, No. 45, relative to the establishment of the Electric Telegraph on the lines of Railway in this Colony, I have the honor to inform you, that His Excellency thinks that the Commissioners for Railways will act wisely in making inquiries as to the best system to be adopted, from the persons at Melbourne, where a line of Telegraph is worked very satisfactorily from the Heads to Geelong and Melbourne, a distance, it is understood, of 70 or 80 miles.

I have, &c.,

W. ELYARD.

THE CHIEF COMMISSIONER  
FOR RAILWAYS.

## No. 8.

MR. SAUL SAMUEL to THE COLONIAL SECRETARY.

*Sydney, 12 August, 1856.*

SIR,

I have just returned from Victoria, where I have made myself thoroughly acquainted with the construction of the Electric Telegraph.

I have done this under the belief that the time has arrived when it must be apparent to all that the formation of electric lines of communication ought no longer to be delayed, if this Colony is to maintain its position with regard to the sister Colonies of Victoria, South Australia, and Tasmania.

In Victoria there are lines already at work between Melbourne, Williams Town, Geelong, and Queenscliff, and others approaching completion in the direction of the boundaries of New South Wales and South Australia, viz., to Bendigo on one side, and Ballarat on the other.

A

A recent arrangement has also been entered into by the Governments of Victoria and South Australia, for the immediate construction of a complete line between the Capitals of the two Colonies.

In South Australia there is a line in operation between Adelaide and the Port, and others are in contemplation, whilst the Government of Tasmania is about to connect Hobart Town and Launceston, and the idea is entertained of a submarine line with Melbourne.

I need not point out to you the great political and commercial importance (if not necessity) of connecting the whole of these Colonies by one general line of telegraphic communication, a measure towards which such considerable progress has already been made in advance of New South Wales by the other Colonies.

My object in now writing is to inform you, that if the Government be prepared to undertake the formation of a telegraphic line between Sydney and Albury, to meet the line which in such case will be continued by the Government of Victoria to their frontier, I am ready to contract for its construction, providing the wires, instruments, and all other materials (which I now have at command,) of the most improved description—similar indeed to those to which the preference has been given in the other Colonies; and if it were desired, I would also undertake to find a competent staff, and work the line for a period of twelve months from its completion.

The present lines in Victoria have proved remunerative, and there is little doubt that the one now proposed, if constructed, would, after the first year, make a profitable return.

The whole of this line, if immediately determined upon, might be completed in the course of the ensuing summer and autumn. It would be important, from the nature of the country to be traversed, that advantage should be taken of the dry season.

I beg to enclose copy of the agreement between Mr. McGowan, Superintendent of Electric Telegraphs in Victoria, and Mr. Todd, holding a similar office in South Australia, also a copy of the Act now in force in the former Colony.

Should my proposition be entertained, I shall be glad to furnish you with such particulars or additional information as you may desire.

I have, &c.,

SAUL SAMUEL.

THE HONORABLE

THE COLONIAL SECRETARY.

&c., &c., &c.

P.S.—I think it necessary to mention, that the copy of agreement enclosed was kindly furnished to me by Mr. McGowan.

No. 9.

THE COLONIAL SECRETARY to SAUL SAMUEL, ESQ.

*Colonial Secretary's Office,*

*Sydney, 15 August, 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 12th instant, and to express to you my thanks for the offer which you have made to undertake the construction of a line of Electric Telegraph between Sydney and Albury, which will be brought under the consideration of the Government, and their decision duly communicated to you.

I have, &c.,

SAUL SAMUEL, ESQ.,  
Sydney.

W. ELYARD.

No. 10.

THE CHIEF SECRETARY, MELBOURNE, to THE COLONIAL SECRETARY.

G.B.  
13.52.

*Victoria, Chief Secretary's Office,*

*Melbourne, 20 September, 1856.*

SIR,

I am directed by Major-General Macarthur to acquaint you, for the information of His Excellency the Governor General, that it is his intention to propose to the Legislature of Victoria the appropriation, on the Estimates for the year 1857, of sums sufficient to extend the lines of Electric Telegraph—now in course of construction from Melbourne to Ballarat and Sandhurst—to the Western Frontier, and the River Murray, near Albury, provided that the Governments of South Australia and New South Wales respectively will undertake to continue the lines to Adelaide and Sydney.

Negotiations

Negotiations to this effect with the Government of South Australia are in progress and I have no doubt that their concurrence will be obtained, and the line to Adelaide completed during the year 1857.

I have now the honor to inquire, whether the Government of New South Wales are willing to make arrangements with this Government for the line between Melbourne and Sydney? And if so, I am to state, that His Excellency will direct the Superintendent of the Electric Telegraph to proceed to Sydney, and place himself in communication with you.

I am to add, that a survey of the best line of communication between Melbourne and Launceston, by sub-marine cable, has been ordered, and that the Government of Tasmania have invited tenders for the construction of a line from Hobart Town to Launceston, with a view to its ultimate extension to Melbourne.

I have, &c.,

WILLIAM C. HAINES.

THE HONORABLE

THE COLONIAL SECRETARY,  
New South Wales.

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No. 11.

THE COLONIAL SECRETARY to THE CHIEF SECRETARY, MELBOURNE.

56-7767

*New South Wales,*

*Colonial Secretary's Office,*

*Sydney, 2 October, 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter of the 20th ultimo, stating that it is intended to place on the Estimates sums sufficient to extend the lines of Electric Telegraph to the Western Frontier of Victoria and the River Murray, near Albury, provided that the Governments of South Australia and New South Wales, respectively, will undertake to continue the lines to Adelaide and Sydney, and inquiring whether the Government of New South Wales are willing to make arrangements with the Government of Victoria, for the line between Melbourne and Sydney.

2. In reply, I have the honor to request that you will have the goodness to apprise me of the sum paid, per mile, for the construction of the Telegraph in Victoria.

I have, &c.,

THE HONORABLE

THE CHIEF SECRETARY TO THE  
GOVERNMENT, VICTORIA.

CHAS. COWPER,

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No. 12.

THE CHIEF SECRETARY, MELBOURNE, to THE COLONIAL SECRETARY.

G.B.

*Victoria,*

15-66

*Chief Secretary's Office,*

*Melbourne, 27 October, 1856.*

SIR,

I have the honor to acknowledge Mr. Cowper's despatch of the 2nd instant and in compliance with the request contained in the concluding paragraph, I now transmit to you the copy of a memorandum by the Superintendent of the Electric Telegraph, relative to the cost of constructing lines in Victoria.

I have, &c.,

THE HONORABLE

THE COLONIAL SECRETARY,  
New South Wales.

J. MOORE,

Under Secretary.

MEMO:

The cost of constructing the lines at present under contract in this Colony, will amount, when completed, to £73 per mile, between Melbourne, Castlemaine, and Sandhurst, and for that between Geelong and Ballarat to £82; these amounts are exclusive of the cost of instruments, and the erection of stations. The contracts issued for the supply of posts, insulators, and the labor; these were taken at £64, and £73 15s., respectively—the Government supplying the wire, the value of which is from £8 10s. to £9 per mile. The cost of the lines hereafter to be erected will not exceed £65 to £70 per mile, including all materials; instruments and stations excepted.

SAM. W. M'GOWAN,

Supt. Electric Telegraph.

*Electric Telegraph Office,*  
*14 October, 1856.*

## No. 13.

PROPOSED CONNEXION WITH MELBOURNE BY ELECTRIC TELEGRAPH.  
*REPORT of Survey, &c., by Charles Todd, Esq., of the Line for the proposed Magnetic  
 Telegraph, between Adelaide and Melbourne.*

*Magnetic Telegraph Department,  
 Adelaide, 17 October, 1856.*

SIR,

In obedience to the commands of His Excellency the Governor-in-Chief, I proceeded to Melbourne in July last, for the purpose of facilitating the negotiations now pending between the Governments of South Australia and Victoria, for establishing a line of Electric Telegraph between Adelaide and Melbourne, as well as to obtain such information respecting the system adopted in that Colony as might be useful to us in the erection of the proposed line; and I have now the honor, as soon after my return as possible, to report to you, for the information of His Excellency, the result of my mission, as well as the route I would recommend, after having completed a general survey of the country to be traversed between Portland and Adelaide.

On my arrival in Melbourne, I immediately put myself in communication with the Honorable the Colonial Secretary of Victoria, by whom, after a courteous and cordial reception, I was referred to the Honorable H. C. E. Childers, the Commissioner of Trades and Customs, from whom I received, during my stay in Melbourne, every possible attention, and much valuable information regarding the lines already established, as well as those in the course of erection, or projected.

It afforded me much pleasure to find that the Melbourne Government were thoroughly earnest in their desire to co-operate with this Colony in connecting the two Capitals; and that they further entertained the extension of inter-colonial telegraphs on a vast scale, so as to unite, by a network of lines, all the large centres of population in Australia; and I am glad to be able to think that the active steps taken by this Government, and the evident intention it has manifested to fulfil its part, of which my visit to Melbourne was the pledge, has moved the neighbouring Colonies to a desire also to co-operate with us in carrying out such useful works; so that we may hope, very shortly, to see the four Colonies of South Australia, Victoria, New South Wales, and Tasmania, galvanically connected.

There is one pleasing feature about this, which I should not fail to remark, viz.—that as each Colony will commence at nearly the same time, and in consequence of the perfect agreement between Mr. McGowan and myself, one uniform system will be adopted throughout, thus avoiding the confusion and unnecessary complications that have so usually attended such undertakings.

For the discussion of all the practical details of the proposed line I was referred, by Mr. Childers, to Mr. Samuel McGowan, the Superintendent of Telegraphs. Mr. McGowan has had long experience in America, principally on the Morse lines, which system he has consequently introduced into Victoria. The manner in which he has constructed the works, as well as his general arrangements, bear testimony to his skill and thorough knowledge of the art. The result of our discussion has been embodied in a joint report, a copy of which I had the honor to furnish you with prior to leaving Melbourne; another copy was sent to Mr. Childers, who, I understood, highly approved of the recommendations therein contained. I shall have occasion to refer again to this report presently.

I, of course, made it my business to make myself thoroughly conversant with all the general arrangements, the kind of instrument used, and also to inspect completely the lines already constructed, and the two now in course of erection.

The instrument used is that known as Professor Morse's recording instrument, the signals consisting of dots and lines made on a ribbon of paper by a pointer, worked by the voltaic current; a combination of such dots and lines forms the alphabet, figures, and stops, according to the code, a copy of which I herewith enclose. On the line now in operation from Melbourne to Queenscliffe, seventy-one miles, a Grove's battery, consisting of fifteen cells, is placed at each end of the line, both, except during the transmission of messages, in constant action, so as to be available at all the stations. Before sending a message the circuit is broken, and the signals are produced by closing the circuit with a key pressed down by the finger. A local Grove's battery, of one cell, is used at each station for the registering



part of the apparatus, and is brought into action by the line batteries charging a relay magnet. One wire only is used, insulated by brown earthenware insulators, of the umbrella form, let in to the top of the posts. This method of insulation is exceedingly good, though scarcely equal to that obtained by the double cone white porcelain insulators.

The only objection to the foregoing arrangement is, that having but one wire frequently limits the use of the line to two stations at one time. Thus, if there were four stations, A, B, C, and D, in the order of the letters, B and D could not exchange signals at the same time as A and C; but A and B could speak to each other, whilst C and D were doing so, by putting the line wire on earth between B and C. This, however, causes no practical inconvenience, though with a crowded system of stations it might occasionally prove an obstruction.

Before leaving this part of my subject, I would briefly refer to an improved Morse's instrument, invented by M. Siemens, of Berlin. Its chief novelty consists in its double action, whereby messages can be transmitted and received by the one instrument simultaneously; so that it would be possible to transmit a message from Adelaide to Melbourne, at the same time that a message was being received from Melbourne. The workmanship, by Messrs. Siemens and Halske, is of the first order, but they are necessarily very complicated, and for general use too expensive; they might, however, I think, be used with advantage at important stations, such as Melbourne and Adelaide. Two will be introduced for the first time to work between Melbourne and Ballarat.

The action and plan of this instrument will be more fully understood by reference to the enclosed diagram, and the following description of the circuits:—

The diagram shows the general arrangements of the several parts of the instrument, as they are fixed on a table made expressly for the instrument, and sold with it. T is the key by which the operator produces the proper signals. S the registering apparatus; *p* the pen, or pricker, held by a lever connected with the armature or keeper of an electro-magnet. W, graduated resisting coils, used when double action is required; consisting of coils of fine wire, affording in the aggregate a resistance equal to about 300 miles of ordinary line wire. R, relay electro-magnet, which, when charged, works a pecker, and closes the circuit of the local battery OB, and works the pen *p*. U, a compound commutator for directing the course of the current, on a principle analogous to the switches on a railway. K1, K2, K3, are moveable metallic switches, the two former being connected by a non-conducting bar. T, O, S, and C, are metallic points, with which the switches are brought in contact as required. K1 has a short arm for lifting the metallic bar 3 off the pointed stud 2. G1 and G2 are two galvanometers. LB the line battery, its circuits being shown by blue and red lines. OB the local battery, its circuit being shown by a green line. E the earth plate. W the line wire.

I will first explain the single action arrangement.

The switch K2 is put on O, and K1 consequently on the middle point marked 1. The resisting coils are set to zero, and thrown out of circuit. The current, arriving from a distant station, enters by the line wire W, through galvanometer G1 to switch K2, on to O, thence, through the key, by T, to switch K1, and through the coils of the relay-magnet R (closing the local circuit and producing the register) to galvanometer G2, entering at 2, and issuing at 3, by the single red line, again, through coils of relay-magnet R, to earth. On entering galvanometer G2, the current cannot keep the blue line and leave at 1, the circuit being broken by the short arm of K1.

To transmit signals, the arrangement being the same, the current leaves as follows:— One pole of the battery is connected with the earth, it is immaterial which (in the diagram the negative pole Z is connected with the earth). The current from the positive pole C, by pressing down the key T on the boss *u*, passes through the key to switch K2, and by galvanometer G1, to line wire W, and along it to the distant station, where, after producing the signals, it finds earth.

For double action the arrangement is as follows:—

At both stations switch K1 is put on T, so that K2 is in contact with the middle point; K3 is put on S. Currents arrive by the line wire W to galvanometer G1; thence, by K2, through coils of the relay-magnet R, to galvanometer G2, out by the blue and red lines to K3 and S, to the key, and from thence by O to switch K1, and by T to the earth.

To

To dispatch signals, the arrangement being of course the same, the current from the line battery (LB) has two circuits; one by the line wire to the distant station, the other passes through the resisting coils to the other pole of the battery. The resisting coils are set so as to afford equal resistance to the line wire; the current from the battery is therefore equally divided, one half passing along the line wire and producing the signals at the distant station, and the other, through the resisting coils, to the battery again. The equal division of the current is determined by the galvanometer G2; the divided current passing through the coils in contrary directions neutralize each other, if of exactly equal intensities, and the magnetic needle, consequently, remains unaffected.

The most interesting circumstance, however, is the fact of being able to send two currents, in contrary directions, along one wire at the same time. I purpose bringing this matter before the Philosophical Society at some future time.

There are at present, in Victoria, seventy-four miles of line in active operation, viz.—from Sandridge to Queenscliffe; with five stations, Sandridge, Melbourne, Williamstown, Geelong, and Queenscliffe; the whole constructed in a very substantial manner. The rates of charges are very high, a message of ten words between Melbourne and Geelong, about fifty miles, being charged four shillings (4s.), and fourpence (4d.) for each additional word; but these rates will be shortly reduced, I believe, one-half. The general regulations are similar to those in force here.

Two lines are now in course of construction, one from Geelong to Ballarat, fifty-eight miles; the other from Melbourne by way of Kyneton and Castlemaine, to Sandhurst, 125 miles; the former at a cost of £73 15s. per mile, the latter at £64, exclusive of the wire, which, in both cases, is provided by the Government—making the total cost of each line per mile about £82 and £72, respectively, without including buildings.

Two other lines having reference to the connection of Melbourne with Adelaide and Sydney, have been decided on, and will probably be erected during the year 1857. One will extend the Melbourne, Geelong, and Ballarat line, by way of Raglan, Warnambool, Belfast, and Portland, to a point at or near the western boundary; an extension of about 230 miles, or 338 miles from Melbourne. The other is now being marked out by the surveyors, and will connect Sandhurst, Benalla, May Day Hills, Beechworth, and—Albury, 250 miles.

During my stay in Melbourne, Mr. Champ, the Honorable the Colonial Secretary, in Tasmania, paid the Colony a visit for the purpose of inspecting the Electric Telegraph prior to its introduction into Tasmania. I need not, perhaps, inform you that, since his return, a line from George Town to Mount Lewis, 180 miles, has been commenced, and I am informed by Mr. McGowan that negotiations of a most favorable character are now pending between the Governments of Victoria and Tasmania for a submarine line to connect the two Colonies, and that there is every probability of the work being undertaken during the ensuing year; each Colony contributing one-half towards the cost of the submarine cable.

The proposed route for this line is from Queenscliffe (Port Phillip Heads) to Cape Otway; thence by submarine cable to King's Island, Barren Island, and Cape Grim; and then along the northern shore of Tasmania to Port Frederick, Port Sorrel, and George Town, where it will meet the line to Launceston, and Hobart Town, now under contract. The greatest stretch of submarine cable will be sixty miles from Cape Otway to King's Island, and the total distance traversed from Melbourne to Hobart Town about 682 miles, at an estimated cost of about £45,000.

I have been thus particular in the foregoing details, because I am desirous of clearly exhibiting the great advantages that will result to this Province by the promotion of inter-colonial telegraphs, and, also, because I think it will reflect no little credit upon this Government for having taken such early and active steps in so important an undertaking; and I would further observe, that whilst the revenue of the projected telegraph to Melbourne will be considerably increased, and its utility commensurately enhanced by its extension to the neighbouring Colonies, the cost and current expenditure will be scarcely affected.

Having accomplished the objects of my mission to Melbourne, I left for Portland, and from that place travelled overland to Adelaide, for the purpose of making a general survey of the country, and deciding on the best route. How I performed this part of my task will be seen from the following account of my travels. I deemed it a serious responsibility, and was anxious to spare no pains in attaining my object.

I left Portland on September 2nd, accompanied by Police Trooper J. R. Ewens, and reached the mouth of the Glenelg the same evening. From there I proceeded to Mount Gambier the next day, carefully examining the nature of the country and timber on my way. The road, soon after leaving the punt, runs on a limestone ridge for the greater part of the first eighteen miles, or till within six miles of Mount Gambier, and then through fine open park land to the Mount. On the ridge, the trees are principally shea oak, with, near the Glenelg, a few wattles and wild cherry, requiring a little clearing all the way. In some places are clusters of straight gum saplings and light wood, suited for posts; and, on each side, for some distance, densely timbered gullies. Near to Mount Gambier there would be only an occasional tree to cut down, whilst, in every direction, there is an abundance of peppermint gum saplings, many fifty and sixty feet high without a bend or branch, of the right girth, and sufficient to supply, at least, forty or fifty miles.

I stayed at Mount Gambier several days, and, before leaving, paid a visit to Penola, to examine the country in that district in the event of a branch being required. In going, I made nearly a straight line from Mount Gambier to Penola, riding through the Dismal, and a succession of large and deep swamps, and returned by way of the Border Inn.

From Mount Gambier to Guichen Bay there is a choice of three routes—one by way of the coast along a limestone ridge; another, the usual road, by Compton, Glencoe, Mount Muirhead, and the Avenue Station; and the third across the Mount Muirhead and Biscuit Flats to within twenty or twenty-five miles of the Bay, and then by the road. I determined on inspecting as much as possible of each, and left Mount Gambier on September 11, going past Mr. Ellis's Home Station, across a stony plain by the Plain Hut, to the ridge running parallel with Lake Bonney on its eastern side, and along the ridge to Mr. George Glen's. I spent the next day in taking bearings of Lake Bonney, Mount Muirhead, Mount Burr, and Mount Gambier; and on the following day, September 13, returned to Mount Gambier, crossing the Mount Muirhead Flat to Mount Burr; and thence, after inspecting the timber on the range, by the Guichen Bay Road, through Glencoe and Compton to Mount Gambier. From Mount Burr to Compton a large quantity of saplings could be obtained.

On September 14, I left Mr. Power's for Mr. G. Glen's, making direct for the bluff end of the Mount Burr Range, and passing it as well as the Snuggery Station a little on my left, so as to ride over as much of the flat as possible. Leaving Mr. Glen's on the 15th, I followed up the coast ridge as far as Lake George, stopping the night at Workwyne (Mr. Scott's), and reached Guichen Bay on the 16th. On leaving Workwyne, I made nearly due east on to the Biscuit Flat, and rode along the flat till I came to the road from Mount Muirhead, about twenty-two miles from Guichen Bay, and then by the road past the Stone Hut into the Bay.

It will thus be seen that I inspected the coast route as far as Lake George, and the last sixteen miles into the Bay, which are common to all; the greater part of the road by Mount Muirhead, and rode over three different parts of the flat. The result of my survey was to induce me to decide on the flat. The coast road is the driest, keeping on an irregular limestone ridge, with frequent steep descents and rises, occasionally dipping into small forests of stunted unserviceable stringy bark. The ridge is lightly timbered with shea oaks; but nowhere along the road, nor nearer than Mount Burr, is there any timber suitable for posts; and the limestone, which is everywhere cropping out, and is very hard where exposed, would render the sinking very laborious. If this road were adopted, the line would leave the ridge near Mr. W. Mitchell's Station, and, after crossing a stony plain, would pass through a stringy bark forest for about two and a half miles, on to the open park land of Mount Gambier.

On the other road, by way of Mount Muirhead, there would be good easy sinking; but about thirty miles of heavy clearing, it passing through dense forests, which would endanger the wire, unless cleared for some distance on each side. The two roads meet about sixteen miles from Guichen Bay, and from their junction to the Bay a Government road has been laid out. The best route would be along the Government road, then take the left of the two roads, which here lead to Mount Muirhead, keeping the road for about twenty-two or twenty-five miles from Robe Town, and then strike across the flat in the direction of Mount Gambier. The best line across the flat will, of course, be determined when laying it out, and care should be taken to leave the flat on the Mount Gambier side, so as to avoid as much clearing as possible, and the white flint, which with limestone is there very abundant.

A great part of the flat—I may say all—is under water during the winter, and was so when I rode over it; but it is good holding ground, and seldom boggy. Beneath the surface,

surface, about two feet, there is a thin crust of limestone, and below that black sandy soil. There would be very little clearing required, and that principally consisting of short honeysuckles, whilst an abundant supply of posts—more than sufficient for the line to the Bay—could be readily obtained from the Mount Burr Ranges.

After a detention of several days at Guichen Bay, rendered necessary by the tired condition of our horses, and the indisposition of the trooper, I again started on the 22nd; and by the 26th had inspected the country as far as Pelican Point, on Lake Albert Peninsula.

On leaving Guichen Bay, I rode for the first eleven miles between the limestone ridge I had already traced as far as Lake George, and which terminates near to Cape Jaffa and the coast, along one of several straight gullies formed by parallel low grassy sand ridges, with a few shea oaks and honeysuckles; then across the ridge, and passing Mount Benson on my left, I rounded a large swamp, and crossed the boundary of County Robe, having Mount Benson south by west, it being nearly due north of Robe Town, and stopped the night at a shepherd's hut near Maria Creek. Except on the ridge, there would be but little clearing, and mostly good ground.

The next day I reached Bradford's station on the Coorong, between the Coorong and the sea. I rode for some miles along the beach of Lacedpede Bay, and was much surprised at the little surf, notwithstanding the stiff breeze that was blowing from the west. From Maria Creek to Tilly's Crossing-place, on the Coorong, a line of parallel grassy sand ridges and hummocks extend for about half a mile inland, well covered with shea oaks; between these and a large lagoon, or rather a series of lagoons, dry in summer, is an extensive flat, in some places a little under water, but without trees, and therefore well adapted for the line. From Tilly's Crossing-place, keeping on the sea side of the Coorong, it is mostly a grassy plain, with a few rather high and steep sand hills running across at right angles from the hummocks on the coast to the Coorong, evidently old sand drifts, but with one exception, which is still actively drifting, they are now well covered with grass. On the other side of the Coorong the limestone appeared to come to the water's edge.

On the 24th, I crossed the Coorong two miles below Bradford's, at a place called the Chinamen's Wells, and thence along that side of the Coorong to McGrath's Flats. For the first eight or nine miles after crossing, the tract is level, and the soil sandy, free, apparently, from rock, and requiring no clearing; from there to McGrath's Flat, thirty miles, it is a succession of sandy flats, and hard limestone ridges, the latter generally well timbered with shea oaks, and extending to the edge of the water. This part of the Coorong is extremely picturesque from the number of bays and inlets, and its varied banks, here low and sandy, and there precipitous limestone cliffs, with high promontories stretching out into the middle of the stream.

From McGrath's Flat to Pelican Point, thirty-two miles, surveyed during the two following days, the line would have to keep, mostly, on a limestone ridge, with shea oaks somewhat thickly congregated. Near to Pelican Point is a thick salt water tea-tree swamp, about 200 yards wide, stretching across from the Coorong to Loveday Bay. All round the point is quite clear; and from it a fine view of the lake and the hills on the opposite side is obtained. As seen from the point, the islands between it and Hindmarsh Island appeared low and flat, without trees; probably mere grassy swamps.

On the 27th, I endeavoured to reach Goolwa, from Lake Albert, in a boat kindly placed at my service by Mr. Stevenson, the Government Surveyor, but the weather became unfavourable, the wind blowing a strong gale, with heavy rain; and, after being nearly capsized, I was obliged to give up the attempt and proceed *via* Wellington the next day, Sunday. From Wellington, I went by Langhorne's Creek to Strathalbyn on the 29th; and from thence to Goolwa on September 30th. I was much disappointed in the country between Strathalbyn and Goolwa. The road, or track, for the greater part of the way, passing through dense high scrub, and so narrow, that, to erect the line of telegraph, it would be necessary to widen it ten feet by clearing the scrub.

At Goolwa, I deemed it unnecessary to make any stay, the Honorable the Surveyor General having already caused a most accurate survey to be made of Hindmarsh and the adjacent islands, as well as of the several channels, with a view to the improvement of the sea mouth of the Murray; I therefore merely crossed over to Hindmarsh Island, and afterwards proceeded, along the tramway, to Port Elliot. It affords me much pleasure to speak, *en passant*, on the good state of repair of the tramway, as well as to its great utility, and the orderly manner in which the business of the establishment is conducted under the superintendence of Mr. Jones.

After spending a few interesting hours inspecting the breakwater, now very properly being extended to a sunken rock within-side Granite Island, and the arrangements making for improving the hitherto insecure moorings, I left *en route* for Adelaide. It now became of great importance to find a supply of suitable timber for posts, as it will be seen, by the foregoing, that I had found none since leaving Mount Burr, a distance of about 225 miles; I therefore examined the entire length of the Mount Jagged tiers, where I found I could obtain almost any quantity of fine blue gum and stringybark saplings, many of them fifty and sixty feet without a bend—the former on a flat extending towards Myponga, and the latter in the tiers.

I stopped the night at the Square Water Hole, and came through Willunga into Adelaide the next day, October 3rd, having ridden about 800 miles since leaving Portland.

On the map, which accompanies this report, the route I would strongly recommend is shewn by a red line. It, of course, only shews the general direction proposed, which may be briefly described as follows:—

From Adelaide, by the South Road over Tapley's Hill, through Noarlunga and Willunga to Middleton; thence along the tramway to Port Elliot, and back by the tramway to Goolwa. From Goolwa across to Hindmarsh and Mundoo Islands to Pelican Point, crossing the several channels by a single wire sub-marine cable; and thence along the Coorong to about fourteen miles beyond the Salt Creek, or near the Chinamen's Wells. It would be well to examine whether it would be better to cross here, or farther on, at Tilley's Crossing-place. From this point the line could keep along the edge of an extensive flat, before mentioned, avoiding the trees, nearly as far as Mount Benson; entering County Robe, with Mount Benson about south by west, and passing to the east of the Mount, cross the limestone ridge, and thence along a shallow gully between parallel sand ridges, at about half a mile from the coast, to Robe Town. Leaving Robe Town, the line should keep the Government Road, and then take the left-hand road to Mount Muirhead, till about twenty-two or twenty-five miles from Guichen Bay, when it should strike across the flat in the direction of Mount Gambier, having Mount Muirhead some distance, and the Bluff a little, on the left: and from Mount Gambier, by the road, to the punt near the mouth of the Glenelg. The distance by this route is about 325 miles, or rather less perhaps. I much prefer the road by Willunga to that by Mount Barker and Strathalbyn, as by far the better, and easier for the construction of the line.

Having detailed the route I would recommend, it remains for me now to explain the plan that should be adopted in the erection of the line, and to describe the instruments and materials required.

First, as regards the Instruments.—I would use the simple Morse's Recording Instrument, excepting perhaps at Adelaide, where, I think, as well as at Melbourne, the improved double-acting instrument by M. Siemens, might be introduced with advantage. The motive power will be generated by Grove's battery, according to the form I will show.

The *line wire* should be No. 6, best charcoal annealed galvanized iron wire, insulated by a brown earthenware insulator of the umbrella shape, fixed on the top of the post by a well-varnished wooden pin, according to a plan I will exhibit. I have already said that I do not consider this insulation so good as the double cone white porcelain, adopted on the Adelaide and Port line; but it is good enough for all practical purposes in a dry climate like this. The line wire would be bound to the insulator at each point by No. 14 or 16 galvanized iron binding wire.

In Victoria the poles are all twenty-five feet long, and buried five or six feet in the ground; the Telegraph Act requiring that the wire should be not less than eighteen feet high. I think, however, that twenty-two feet would be quite long enough, each post being buried five feet where the ground is soft, and four feet in the limestone and rock. Such an alteration would increase the quantity of available timber, and make a considerable difference in the cost of cartage—an important matter where there is such an extent of country to traverse entirely destitute of serviceable timber.

The posts must be entirely barked, and charred and tarred for five feet up from the butt, and the top bound with hoop iron one inch wide. The dimensions should be as follows—seven or eight inches in diameter at the base, and five inches at the top. A hole must be drilled in the top of the post for the insertion of a wooden pin for the insulator, in the manner I will show. In townships the posts might be squared and painted white, but no where else.

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As before stated, I propose crossing the several channels between Goolwa and Lake Albert Peninsula, by a single wire submarine cable, according to a specimen now in my possession. It could be purchased at a reasonable price of Messrs. Newall & Co., who have, I believe, several remnants on hand. The two swampy islands between Reedy Island and Pelican Point afford such bad holding ground for posts, that I would have but one length of cable between these points, and bury the cable where it crossed these islands; for this purpose about five or six miles of cable will be required. The cable should be protected from lightning, where it joins the line wire, by a lightning conductor of the form, and arranged in the way I shall direct.

It will be necessary to cut down all trees on each side that, in falling, could injure the line; and all underwood and scrub, for at least ten feet round every post. By the route I have proposed, this will not cause much heavy clearing, the timber for the greater part of the distance consisting principally of shea oaks and honeysuckles, neither very thick, and easily removed. In some places, however, where the line passes through forests—but they are not frequent, nor very long—the clearing would necessarily be heavy, and I have accordingly made proper provision in my estimates.

To preserve the posts from bush fires, where the holes are made through limestone, which will be the case for a great part of the way, the removed limestone can be placed closely round the base of the pole; and where that cannot be done, the grass round the posts should be burnt in the month of December in each year. The cheapest plan of doing this would, probably, be to employ natives to do it under the superintendence of the Line Inspectors. The line can in this way be effectually preserved, at a trifling annual expense. And from any injury that might be apprehended from the curiosity or mischievousness of the natives, by placing it, as it were, under their charge, and so appealing to their sense of honor, with the promise of an annual reward of blankets and tobacco, would I think make us quite safe.

To keep the line in a state of efficiency, and to effect repairs promptly, it will be proper to have Line Inspectors distributed much as follows:—

One at Adelaide, whose duty it would be to keep in repair the line as far as Willunga, as well as the Port and Gawler Town lines;

One at Goolwa, whose duty would extend to Port Elliot and Willunga, on the one side, and to Tilley's Crossing-place, on the Coorong, on the other;

One at Guichen Bay, for the line between Tilley's Crossing-place and half way from Guichen Bay to Mount Gambier; and one at Mount Gambier, whose duty would extend from the last point to the boundary.

This would be quite sufficient, as I do not apprehend frequent accidents.

In agreement with the plan of erection detailed in the foregoing, I have prepared estimates of the cost of the line, with respect to which I would observe that I have over, rather than under, estimated the sum required. But I would here respectfully urge, for the consideration of His Excellency, the great importance of getting as much of the work done during the summer as possible. Along a great part of the line the country is almost inaccessible in the winter; the wet portions of the line should, therefore, be finished first, leaving the drier parts to be completed in the winter. The cartage of the posts, especially, should be entirely performed in the summer. I have no hesitation in saying that the cost of erecting the line in the winter would be ten pounds a mile more than in summer. I hope, therefore, if the line be decided on, it can be commenced, certainly not later than the first of January next, in which case it might be completed by the end of the year. The posts should be commenced cutting down, if possible, next month, as they will require some six weeks' seasoning, and they are much more easily barked in the spring than in the summer.

The following is the estimated cost of the Line of Electric Telegraph for the connection of Adelaide and Melbourne, included within South Australia, exclusive of stations and buildings:—

325 miles of line, at £60 per mile.....	£19,500
Apparatus and sundries .....	500
Survey.....	500
Total cost, exclusive of stations .....	20,500

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From the nature of the country to be traversed, it will be necessary to peg out the line, as well as to measure it: the distance I have given is merely my estimation from riding over it, and is probably a few miles, not more, in error.

Adverting briefly to the joint report by Mr. McGowan and myself, I would first refer to article 6, recommending the passing of an Act specially relating to Electric Telegraphs, similar to the one in force in Victoria; with respect to which I think that many of the provisions of the Victorian Act are highly important, especially wherein it refers to secrecy on the part of the officials, it being necessary that the public should have every protection, and be able to place the utmost confidence in the secrecy of the officers.

The rate of charges recommended in article 9 will, I think, soon admit of reduction; but I would not advise *commencing* with lower rates, it being far better to *reduce* the charges than, by fixing them at first too low, have to raise them afterwards. The great object is to bring the use of the Electric Telegraph within the reach of all, so as to cause it to be the general medium of communication on matters of a trivial character, and of constant occurrence, and not merely of those of grave import. Experience teaches me that the business of an Electric Telegraph admits of almost infinite extension by the adoption of the lowest possible charges.

The annual expenditure for the maintenance and working of the line will not, I apprehend, be more than the amount estimated in article 10; and the revenue, on the adoption of the charges recommended in the previous article, will most certainly exceed rather than fall short of the sum stated. The arrangement for the equal division of receipts upon all intercolonial messages includes *every* station in the two Colonies, and not merely those on the direct line between Adelaide and Melbourne. And it will be further evident that the extension of the Electric Telegraph to New South Wales and Tasmania will bring in a great amount of business not contemplated in our estimate, without very materially increasing the working expenses. The report, it will be seen, assumes the route to be by Mount Barker and Strathalbyn, instead of by Willunga, as I now propose. There should be a station at Willunga. The estimated cost of the line was only preliminary: it is less than that given in this report, but this circumstance does not materially affect the statement shewing the estimated net revenue.

Attention has been recently very generally directed to our River Murray navigation, and with a view of further developing the rapidly increasing trade up that river, a railway from Adelaide to its banks has been seriously considered, shewing the high importance attached to our commerce in that direction. I need scarcely draw attention to the fact, that the Electric Telegraph, by connecting the extreme points of our navigation, would render an assistance which, when once enjoyed and appreciated, would be found to be a vital necessary.

No people in the world are more alive to their own interests, and the necessity of developing to the utmost their commercial resources, than are the Americans; and it was their boast, some years since, that they had more lines of Electric Telegraph in the United States than there were in the whole of Europe. Quoting from an account dated 1853, there were then 24,375 miles of lines in the United States alone; and the receipts of one company, for the year ended June 1852, were 103,232 dollars 37 cents, derived from 253,857 messages. This will show the value and importance in which the Electric Telegraph is held in America.

With the same amount of industry, and an equally enterprising spirit, a bright future lies before South Australia; and if, as an humble servant of the Government, I can in any way assist in promoting her welfare, I shall indeed consider myself amply rewarded for any amount of labor or thought I can bestow in her service.

I cannot conclude this Report without acknowledging the kindness and courtesy I received from the Members of the Victorian Government, especially from the Honorable H. C. E. Childers, and Samuel McGowan, Esq. My thanks are also due to Major Warburton, and Inspector G. B. Scott, Esq., for the admirable arrangements they made for facilitating my overland journey; nor ought I to omit to thank those gentlemen whose kind hospitality and assistance I received on my way.

I have, &c.,

CHARLES TODD,

Observer and Superintendent of the Magnetic Telegraph.

THE HONORABLE  
THE COLONIAL SECRETARY,  
South Australia.

[Joint Report by Messrs. McGowan and Todd, referred to in the foregoing.]

Melbourne, 25 August, 1856.

We, the undersigned, viz., S. W. McGowan, Superintendent of Telegraphs in the Colony of Victoria, on the one part, and Charles Todd, Observer and Superintendent of Telegraphs in the Colony of South Australia, on the other part, having been deputed by our respective Governments to confer with each other, for the purpose of reporting on the expediency of establishing a line of Electric Telegraph between the Capitals of the two Provinces, and further to consider the best method of constructing such line, and afterwards effectually working it, so as to secure its chief objects and conduce most to the interests of both Colonies, have now the honor herewith to report:—

1. That the importance of establishing a telegraphic communication between the two Colonies cannot, in our opinion, be well over-estimated. That we consider it would be of great benefit, both to the several Governments as well as to the commercial interests of the three Colonies of New South Wales, Victoria, and South Australia, if they were connected by telegraphic lines, based on one uniform and scientific system, which should connect, by branch lines or otherwise, all places of commercial importance in the great scheme.

2. The advantages resulting from the construction of telegraph lines connecting the three principal Colonies, are so manifest as to require no more than a passing allusion. Such lines, by affording the means of almost instantaneous communication, and giving thereby increased facilities to inter-colonial trading, would tend greatly to develop our commercial resources, and by placing each Colony on an equal footing with regard to European news, shipping, and general intelligence, the difficulties which now exist in effecting our postal arrangements, so as to satisfy the claims of all, would be in a great measure obviated. The Telegraph would prove of great service to the Police; and by connecting several points on the sea-coast it would frequently be useful in cases of shipwreck, or of vessels in distress.

3. We think, therefore, that each Government should pledge itself to construct a line of Electric Telegraph for the purpose specified, within its own territory, which should meet the line constructed by the neighbouring Colony, either on their common boundary, or at any point that may be afterwards determined upon.

4. With regard to this matter, we would call attention to the fact that the South Australian line will have but one station, or at least but one paying station, on the east side of the Murray, viz., Mount Gambier; the intervening country, for nearly one hundred and eighty (180) miles, being little better than a desert. We deem it proper to call attention to this circumstance, inasmuch as the South Australian Government has based upon it a claim for assistance from the Government of Victoria.

5. We would recommend that the same instrument be used throughout, viz.—Morse's recording instrument; or, perhaps, that instrument as modified by Messrs. Siemens and Halske, of Berlin; and also, that the code, regulations, and general arrangement, be the same, so far as possible, in the two Colonies.

6. As there is no Act in South Australia relating to Electric Telegraphs, similar to that in force in Victoria, we deem it highly desirable that such an Act should be passed by the Legislature of South Australia.

7. We consider that the most equitable arrangement with regard to the revenue, would be an equal division of receipts derived from all *inter-colonial* messages, between what stations soever they may pass; the cash accounts to be settled monthly, or at such intervals as may appear most convenient.

8. This arrangement would not, in any way, be affected by the establishment of a line of Telegraph to Sydney; and should that line be carried out (as we hope it may), we would recommend a similar arrangement with regard to receipts for messages between Victoria and New South Wales, and for messages between South Australia and New South Wales; also an equal division between the three Colonies.

9. Until experience supplies us with proper data, we would advise that the rate of charges for messages not exceeding ten (10) words, should be according to the following table, the names and addresses being free, and twopence (2d.), threepence (3d.), or fourpence (4d.) for every additional word, according to distance.

PROPOSED Rate of Charges on the Adelaide and Melbourne Electric Telegraph.

STATIONS.	Geelong.	Ballarat.	Raglan.	Warnambool.	Belfast.	Portland.	Mt. Gambier.	Guichen Bay.	Goolwa.	Port Elliot.	Adelaide.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Melbourne .....	2 0	3 0	3 0	4 0	4 0	4 0	5 0	5 0	6 0	6 0	6 0
Geelong .....	...	2 0	2 0	3 0	3 0	3 0	5 0	5 0	6 0	6 0	6 0
Ballarat .....	...	...	2 0	3 0	3 0	3 0	4 0	4 0	6 0	6 0	6 0
Raglan .....	...	...	...	2 0	2 0	2 0	4 0	4 0	6 0	6 0	6 0
Warnambool .....	...	...	...	...	2 0	2 0	3 0	3 0	5 0	5 0	5 0
Belfast .....	...	...	...	...	...	2 0	3 0	3 0	5 0	5 0	5 0
Portland .....	...	...	...	...	...	...	3 0	3 0	5 0	5 0	4 0
Mt. Gambier .....	...	...	...	...	...	...	...	2 0	3 0	3 0	3 0
Guichen Bay .....	...	...	...	...	...	...	...	...	3 0	3 0	3 0
Goolwa .....	...	...	...	...	...	...	...	...	...	1 0	2 0
Port Elliot .....	...	...	...	...	...	...	...	...	...	...	2 0



Press matter should be charged at the rate of one penny (1d.) per word for all distances not exceeding three hundred (300) miles, and twopence (2d.) for all greater distances. All messages on the service of either Government should be sent free.

10. In recommending the foregoing rates of charges, consideration has been paid to the estimated cost of construction, the working expenses and maintenance of the line, and also, so far as our imperfect data admitted, of the probable revenue resulting therefrom. These estimates we give below in detail, by which it will be seen, that, putting all the messages at the lowest charges, and the number probably much lower than what will be actually sent, there will be, after deducting six (6) per cent. interest on the outlay, a considerable surplus.

1. Estimated Cost of Line.		£
In Victoria—say 300 miles, at £75 per mile.....		22,500
In South Australia—say 320 miles, at £60 per mile.....		19,200
Total cost of Line .....		41,700, or say £45,000.
2. Estimated annual working expenses and maintenance of Line. Stations (including all contingent expenses.)		
In Victoria—Melbourne .....		
Geelong .....		£500
Ballarat .....		500
Raglan .....		700
Warnambool .....		700
Belfast .....		400
Portland .....		500
Incidental expenses .....		600
Total .....		800
In South Australia—Adelaide .....		800
Mount Barker .....		300
Strathalbyn .....		300
Goolwa .....		300
Port Elliot .....		300
Guichen Bay .....		300
Mount Gambier .....		300
Incidental expenses .....		600
Total .....		3,200, or say £3,500.
Total annual expenditure .....		£8,500
Interest on outlay (£45,000) at 6 per cent. ....		£2,700
Annual maintenance.....		£11,200
3. Detailed estimate of Revenue.		
Melbourne and Adelaide—50 messages per diem, @ 6s. ....		£15 0 0
Adelaide, with all Gold-fields and Intermediate Stations—50 messages per diem, @ 4s. ....		10 0 0
Melbourne, Gold-fields, and Intermediate Stations—150 messages per diem, @ 4s. ....		30 0 0
Ten Intermediate Stations averaging 10 messages per diem, or 100 messages @ 3s. ....		15 0 0
Total daily receipts .....		£70 0 0

Of this revenue we may assume that two-thirds ( $\frac{2}{3}$ ) will accrue to Victoria, and one-third ( $\frac{1}{3}$ ) to South Australia;—supposing, therefore, the line to be in good working order, say three hundred (300) days in the year, the net yearly revenue accruing to the two Colonies will be as follows:—

	Gross Annual Revenue.	Expenditure.	Net Annual Revenue.
	£	£	£
To Victoria .....	14,000	6,470	7,530
To South Australia.....	7,000	4,730	2,270
Total .....	21,000	11,200	9,800

11. In conclusion, we would suggest that the Governments of Victoria and South Australia should each urge upon the New South Wales Government the great importance of inter-colonial telegraphic communication—important as furthering our immediate interests, and in drawing closer the relations which should subsist between the three principal Colonies of Australia, and further important, as being a step in the direction of our ultimate telegraphic connection *via* India, with England—a scheme, vast and difficult as it may appear, and really is, will, we doubt not, at no very distant day be carried out.

SAM. WM. MCGOWAN.  
CHARLES TODD.

1856.

Legislative Assembly.  
NEW SOUTH WALES.

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# REPORT

FROM

THE SELECT COMMITTEE

ON THE

## ELECTRIC TELEGRAPH;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,  
MINUTES OF EVIDENCE,  
AND APPENDIX.

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ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

18 December, 1856.

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Sydney:

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

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1856.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

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VOTES No. 36. FRIDAY, 31 OCTOBER, 1856.

12. Electric Telegraph:—Mr. Parkes moved, pursuant to *amended* notice,—
- (1.) That a Select Committee be appointed to consider and report upon the subject of the introduction into New South Wales of the Electric Telegraph; more especially with reference to the rapid extension of that means of communication in the adjacent Colony of Victoria.
- (2.) That such Committee consist of the following Members, viz.:—Mr. Arnold, Mr. Faucett, Mr. Hay, Mr. Macarthur, Mr. Irving, Mr. Cowper, Mr. Weekes, and Mr. Parkes.
- Question—(1.) That a Select Committee be appointed to consider and report upon the subject of the introduction into New South Wales of the Electric Telegraph; more especially with reference to the rapid extension of that means of communication in the adjacent Colony of Victoria,—put and passed.
- Question—(2.) That such Committee consist of the following Members, viz.:—Mr. Arnold, Mr. Faucett, Mr. Hay, Mr. Macarthur, Mr. Irving, Mr. Cowper, Mr. Weekes, and Mr. Parkes,—put and passed.
- 

VOTES No. 49. WEDNESDAY, 26 NOVEMBER, 1856.

11. Proposed Establishment of a Line of Electric Telegraph:—Mr. Hay moved, pursuant to notice, That the Correspondence respecting the proposed construction of a Line of Electric Telegraph, laid upon the Table by him yesterday, be referred to the Select Committee on the proposed Establishment of a Line of Electric Telegraph.
- Question put and passed.
- 

VOTES No. 62. THURSDAY, 18 DECEMBER, 1856.

2. Electric Telegraph:—Mr. Parkes, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee appointed on the 31st October last to consider and report upon the subject of the introduction into New South Wales of the Electric Telegraph, more especially with reference to the rapid extension of that means of communication in the adjacent Colony of Victoria.
- Ordered to be printed.
- 

REPORT

1856.

## ELECTRIC TELEGRAPH

## REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 31st October last, "to consider and Report upon the subject of the introduction into New South Wales, of the Electric Telegraph, more especially with reference to the rapid extension of that means of communication in the adjacent colony of Victoria," and to whom was referred, on the 26th November last, certain "correspondence respecting the proposed construction of a Line of Electric Telegraph," have agreed to the following Report:—

In carrying out their enquiry, your Committee have carefully considered the documents referred to them by your Honorable House on the 26th November, and they have also taken the evidence of several gentlemen who, from their knowledge of the general subject, and from the attention they had previously given to the proposed adoption of Telegraphic communication in this Colony, were enabled to bring much valuable information to bear on the enquiry.

Besides the lines which have for some time past been in full operation connecting Queenscliffe, Geelong, Williamstown, and Sandridge, with Melbourne, the Government of Victoria are now constructing Telegraphic Lines from Geelong to Ballarat, a distance of fifty-eight miles, and from Melbourne to Sandhurst, by way of Kyneton and Castlemaine, one hundred and twenty-five miles, and the preliminary steps have been taken to bring every considerable point of the population into telegraphic communication with the neighbouring Colonies by one complete system. With this view, negotiations have been opened with the other Governments, and already a competent officer, on the part of South Australia, has visited Melbourne, to collect data from the practical experience of the authorities there, and has examined the country between that city and Adelaide, preparatory to the commencement of a line uniting the two capitals. On the 20th September last, the Chief Secretary of Victoria opened a correspondence with the Government at Sydney, proposing to place on the Estimates for 1857, a sufficient sum to open an inter-colonial line as far as Albury, in the direction of this Metropolis, provided the Government of New South Wales were prepared to continue it from that point. The distance from Melbourne to Albury is 250 miles; from Albury to Sydney 380 miles. The line on the Victoria side will connect Sandhurst, Benalla, May Day Hills, and Beechworth in its course. In Tasmania contracts have been entered into for the construction of a line of telegraphic communication between Hobart Town and Launceston, and it is proposed to unite that island with the Continental Colonies, by sinking a submarine cable at Cape Otway, and carrying it thence to King's Island, Barren Island, and Cape Grim. From that point of the Tasmanian coast the line will run along the northern shore to Port Frederick, and thence to Port Sorrel and Georgetown, where it will connect itself with the Line from Hobart Town to Launceston. On the Victoria side of the Straits the Telegraphic connection will be carried to Cape Otway from Queenscliffe.

Such is an outline of the Australian scheme, which may be said to have been originated by the Colony of Victoria; and towards the completion of which New South Wales is the only Colony which, as yet, has made no advance. The questions submitted for the consideration of your Committee have assumed a much more urgent character from the comprehensive plans which, there is every reason to believe, the other Colonies will cordially  
join

join in carrying out, and which might be completed without our co-operation, with no disadvantage to them beyond the absence of one Colony from the system of inter-communication so established, while the injury to us would be to the extent of our exclusion from the whole group. It thus appears to your Committee, that the connecting of Sydney with Melbourne by means of the Electric Telegraph is no longer a speculative question of expediency, but one of practical bearing and immediate necessity, which calls for active measures, to preserve the position of this Colony in its various relations with the other Australian provinces.

From a statement under the hand of Mr. McGowan, the Superintendent of Electric Telegraphs in Victoria, it appears that the line from Melbourne to Sandhurst will cost £73 per mile; and the line from Geelong to Ballarat, £82 per mile; in both cases, exclusive of instruments and the erection of stations. The cost of the projected line from the western boundary of Victoria to Adelaide—a distance of 325 miles—is estimated by Mr. Todd, the Superintendent of the Magnetic Telegraph in South Australia, at £20,500, exclusive of the expense of stations. From the evidence taken on this point, your Committee have been led to the conclusion, that the cost of constructing a line of Telegraph from Sydney to Albury, in the manner most adapted to the character of the country, including instruments, and the erection of stations, would not exceed £100 per mile; and they are inclined to the opinion, that contracts might be entered into at a lower figure. Sufficient material for the completion of the line, and persons of the necessary experience and competency to take charge of it when completed, might be obtained in the adjacent Colony, without delay or difficulty.

From a calculation made by Mr. McGowan, as to the profitable working of the Line, it is estimated that the business between Sydney and Melbourne, with the intermediate stations, would be sufficient to raise a revenue in excess of the current expenses by 12 per cent. on the original outlay of capital, still leaving a surplus fund; but the extended intercourse with the remoter Colonies of Tasmania and South Australia would, of necessity, greatly increase the receipts. Upon the whole, your Committee are of opinion that this may fairly be classed among the future reproductive works of the Colony.

In Victoria the instrument adopted is that known as Morse's Recording Telegraph, but your Committee, from the evidence before them, feel warranted in expressing their opinion in favour of Henley's Patent Magneto-Electric instrument, as being of higher scientific construction, and capable of greater accuracy. The use of different instruments would cause a break in the communication at Albury; or, in other words, would necessarily render the Line, on either side, independent in itself. If Professor Morse's Telegraph were used at each end, however, it is believed that a break would still be unavoidable, on account of the inefficiency of any Battery to carry a message the whole distance. With the exception of the junction at Albury, it is not likely that any inconvenience could arise hereafter from the use of a different class of instruments in this Colony, if superior advantages were offered by their employment, as our system would be complete in itself, till extended northward, where the Authorities of New South Wales would be sure to be the first parties to move. In that direction, at no very distant date, we shall probably communicate by the Electric wire with the Indian Empire and with Europe.

After mature deliberation, your Committee are prepared to make the following specific recommendations:—

- (1.) That immediate steps be taken, in concert with the Government of Victoria, to connect the Cities of Sydney and Melbourne by Electric Telegraph.
- (2.) That a sum not exceeding £38,000 be placed on the Estimates for 1857, for that purpose.

Your Committee, in conclusion, would recommend that at an early period the town of Bathurst, as the industrial and commercial centre of an important and rising District, should be connected with the metropolis by Electric Telegraph. The desirability of thus rendering the Western District accessible by Electric communication appears second only to the Great Southern Line already recommended.

*Legislative Assembly Chamber,*  
18 December, 1856.

HENRY PARKES,  
Chairman.

PROCEEDINGS OF THE COMMITTEE.

TUESDAY, 2 DECEMBER, 1856.

**Members Present:—**

Mr. Parkes,		Mr. Macarthur,
Mr. Cowper,		Mr. Hay,
	Mr. Faucett.	

Mr. Parkes was called to the Chair.

Mr. Edward J. Spence examined.  
[Adjourned till Friday next, at Eleven o'clock.]

FRIDAY, 5 DECEMBER, 1856.

**Members Present:—**

Henry Parkes, Esquire, in the Chair.

Mr. Macarthur,		Mr. Irving.
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Mr. Saul Samuel, and Mr. A. E. Dodwell, examined.  
[Adjourned till Wednesday next, at Ten o'clock.]

WEDNESDAY, 10 DECEMBER, 1856.

**Members Present:—**

Henry Parkes, Esquire, in the Chair.

Mr. Macarthur,		Mr. Irving.
	Mr. Cowper.	

Mr. John Thompson, Deputy Surveyor General, examined.

Committee deliberated as to whether there existed any necessity for taking further Evidence on the subject under consideration, and were of opinion that the Evidence already taken, together with the information contained in the Correspondence respecting the proposed construction of a Line of Electric Telegraph, referred to the Committee, on the 28th November last, would be amply sufficient to enable them to Report to the House forthwith, without entering upon the examination of any more witnesses.

Committee then considered whether it would be expedient to recommend any particular Line of Telegraph for immediate construction.

Motion made (Mr. Cowper,) and Question—"That in the opinion of this Committee it is expedient to recommend to the House the immediate construction of a Line of Electric Telegraph between Sydney and Albury, in such a manner as to meet the proposal of the Government of Victoria, set forth in the Correspondence relative to the Electric Telegraph, referred to the Committee"—*agreed to.*

Motion made (Mr. Cowper,) and Question—"That the Chairman be requested to prepare a Draft Report for the consideration of the Committee"—*agreed to.*  
[Adjourned till Tuesday next, at half-past Ten o'clock.]

TUESDAY, 16 DECEMBER, 1856.

**Member Present:—**

Mr. Parkes.

A Quorum of the Committee not being present,—  
[Adjourned till Thursday next at Eleven o'clock.]

THURSDAY, 18 DECEMBER, 1856.

**Members Present:—**

Henry Parkes, Esquire, in the Chair.

Mr. Macarthur,		Mr. Irving,
	Mr. Cowper.	

At the request of the Chairman, Committee decided upon examining Mr. W. A. Sprigg, then in attendance for the purpose of giving Evidence, before considering the Draft Report.

Mr. W. A. Sprigg examined accordingly.

During his examination Mr. Sprigg exhibited "Henley's Patent Magnetic Apparatus" to the Committee, who inspected the same.

Portion of Draft Report, proposed by the Chairman, read.

Committee deliberated on the same.

Motion made, and Question—"That this Committee do now adjourn till a quarter to Three o'clock this day"—*agreed to.*

[Adjourned till a quarter to Three o'clock *this day.*]

THURSDAY,

THURSDAY, 18 DECEMBER, 1856.

**Members Present:—**

Henry Parkes, Esquire, in the Chair.  
 Mr. Cowper, | Mr. Irving,  
 Mr. Macarthur.

Committee met to consider Draft Report, pursuant to a Resolution passed at previous Meeting *this day*.

Remaining portion of Draft Report, proposed by the Chairman, read.

Motion made, and *Question*—"That this be the Report of the Committee"—*agreed to*.  
 Chairman requested to Report.

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Rough Estimate, shewing the cost of the construction of a Line of Electric Telegraph from Sydney to Port Essington ..... page 19

To Evidence given by MR. W. A. SPRIGG, on 18 December, 1856,—

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1856.

NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

## ELECTRIC TELEGRAPH.

TUESDAY, 2 DECEMBER, 1856.

Present:—

Mr. COWPER,  
Mr. FAUCETT,

Mr. PARKES.

Mr. HAY,  
Mr. MACARTHUR,

HENRY PARKES, ESQUIRE, IN THE CHAIR.

Edward J. Spence, Esquire, called in and examined:—

1. *By the Chairman:* You arrived in the Colony in connexion with one of the gold companies? Yes, the Colonial Gold Company.
2. How long ago? About five years.
3. Have you been in connexion with that kind of enterprise ever since your arrival? Entirely so.
4. Your attention latterly has been directed to the proposal for constructing an Electric Telegraph in this Colony? I have given the subject a good deal of consideration for some months past.
5. Will you have the kindness to state what circumstances first directed your attention to the subject? It was in consequence of a visit to Melbourne, where I became acquainted with Mr. McGowan, the Superintendent of Telegraphs in Victoria, and also with a gentleman who has been the importer of all the material used in the construction of the Victorian lines of telegraph.
6. When was that? Some six or eight months back.
7. Had you any previous acquaintance with the working of Telegraphs before you left England? None, except from ordinary observation.
8. Lately you have been making some explorations to test the practicability of constructing a line of telegraph between Sydney and Melbourne, with the view of, in some manner, engaging in it yourself? I have recently travelled over the whole ground, being desirous to ascertain if it were practicable to construct it at any moderate cost, and I entertained the idea of undertaking the construction, if I could see any advantage in doing so.
9. When did you leave Sydney on this excursion? On the 10th October last.
10. Up to that time had you taken any particular steps with a view to the same object? Only making ordinary inquiries, and ascertaining what had been done in other colonies. I had frequent interviews with Mr. McGowan, and also with Mr. Todd, the representative of the South Australian Government, on this subject, when he came over to Melbourne.
11. And also with gentlemen in Sydney? Yes.
12. All prior to leaving for Melbourne in October? Yes.
13. Will you have the kindness to state to the Committee what course you took, and the result generally of your experience in making this overland journey to Melbourne? The course we took was along the post line of road, through Camden, Goulburn, Yass, Gundagai, and to Albury.
14. Who accompanied you? Mr. Saul Samuel and Mr. Lecapleine.
15. Did these gentlemen proceed with you with a view to embarking in the undertaking with you if circumstances warranted you in so doing? I believe that was their object. They felt the same interest in the matter as I did myself.

E. J. Spence,  
Esq.  
2 Dec., 1856.



E. J. Spence, Esq.  
2 Dec., 1856.

16. Mr. Lecapleine was an Engineer? He was a Civil Engineer of experience in England.

17. Did you cross the Murray and proceed to Melbourne? We crossed the Murray, and proceeded in the first instance to Bendigo along the line of road that we supposed the Telegraph would be carried by the Victorian Government; and afterwards we took another route to Melbourne by way of Kilmore, instead of the usual line by way of Castlemaine.

18. Did you see any indications of steps being taken on the part of the Victorian Government to construct the Telegraph to Albury? About one mile on the other side of the Murray we met the surveyor, who was marking out the line and fixing the sites for the posts.

19. *By Mr. Cowper*: Have you not heard whether the Victorian Government have not entered either actually or conditionally into a contract for carrying on the Electric Telegraph as far as Albury? The contract has not yet been entered into. The line originally thought of has been abandoned. They first intended to have connected the line from Sandhurst with the Murray by following a cross country route, but now they intend to bring it direct from Melbourne by way of Kilmore and the M'IVOR Diggings to the Murray. The tenders will be called for this month, with a view to open them in January, after the Victorian Parliament shall have decided on the money vote.

20. Then the subject has yet to be brought under the consideration of the Victorian Parliament by the Government of the Colony? Yes, as far as the money question is concerned; but the whole of the information has been obtained, and the tenders will be given in, but not opened till then. That is all that has been yet done.

21. *By the Chairman*: Will you have the kindness to state to the Committee what impression you and your friends have come to as to the best means of constructing the Electric Telegraph to Albury on our side? If it is to be constructed at any moderate cost, I think it will be necessary, in many instances, to make use of the forest trees. There is a great difficulty in obtaining timber for posts for a very large proportion of the distance, and the ground is also exceedingly hard in many places. There are greater difficulties in this respect on this side the Murray than there are on the other.

22. You think that to make use of the trees would be a better and more economical course than erecting posts? It will certainly be more economical, and I believe it will be equally efficient in every respect.

23. Does the face of the country offer any serious natural impediments to the operation? There is no serious impediment to carrying out the work, but the difficulty is in obtaining suitable timber for posts. It would have to be conveyed a considerable distance through the bush, if posts were used along the whole line of road.

24. But in the event of the trees being used that difficulty would not exist? No.

25. If you undertook the construction of the line, would you carry it along the post line of road? As near as possible. Some slight deviations might be allowed where distance might be saved, or to take advantage of facilities offered by trees.

26. What do you suppose the expense would be of constructing a line from here to Albury? I think, you have before you an estimate of Mr. M'Gowan's, in Victoria. I think I recognize the paper. My opinion is that his estimate would be too low, unless you adopted the forest trees.

27. I have an estimate here, but I do not know whether it is Mr. M'Gowan's or not, in which the cost is set down at £85 a mile from Melbourne to Sydney. The estimate is put thus:

600 miles of line at £85 per mile.....	£51,000	0	0
Instruments, &c., for ten stations.....	1,000	0	0
Office furniture and fittings .....	1,000	0	0
Contingencies.....	2,000	0	0
Total.....	£55,000	0	0

What is your opinion as to that Estimate? I do not think you would effect any saving over that estimate, even if you used the forest trees instead of posts, between Sydney and Albury.

28. How many miles is it to Albury? The post makes it 367 miles from Sydney to Albury. I do not know whether it has been measured.

29. Can you state any facts, that are within your recollection, of the result on the longest established lines of Electric Telegraph, in Victoria? I believe the Geelong line is remunerative. Mr. M'Gowan's impression is that the lines will pay. I believe you have the estimate before you in which he calculates that 12 per cent. should be realized per annum, besides leaving a surplus to meet contingencies, and I have the opinion of some gentlemen extensively engaged in mercantile matters, who think he has not overrated the returns.

30. The abstract statement of Mr. M'Gowan gives this result:

Total yearly revenue for the transmission of messages...	£19,500	0	0
Salaries and working expenses for year.....	11,324	0	0
Dividend at 12 per cent., on £55,000 .....	6,600	0	0
Surplus fund .....	1,576	0	0
	£19,500	0	0

This estimate, I presume, has been present to your mind for sometime—you have often thought it over? Yes; I have been aware of it for some time.

31. From your consideration of the subject and your knowledge of the Colony, extending as it has done over five years, do you think this estimate would be borne out if the line were constructed? I dare hardly venture to express an opinion on that point, because I have not been engaged in mercantile matters here, and it is entirely a question as to the number of messages to be transmitted.

32. I merely desired to know whether you had formed an opinion? My opinion was favorable to the estimate, because I have taken the opinion of mercantile men who seem to think he has not overrated the number of messages.

33. This is his estimate of the revenue :

Fifty messages, daily, between Melbourne and Sydney, at 8s...	£22	10	0
Fifty " " Sydney and Melbourne, " ...	22	10	0
Twenty " " Melbourne and Beechworth, at 5s.	5	0	0
Twenty " " Beechworth and Melbourne, "	5	0	0
Twenty " " Sydney and Beechworth, "	5	0	0
Twenty " " Beechworth and Sydney, "	5	0	0

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Total daily revenue... £65 0 0

I believe this is only an estimate of the mercantile business which he supposes would be done, exclusive of all communications in connexion with the Press, which would form no inconsiderable item? I believe so. There is another point you may also consider, that the intermediate stations along the line are not put down. I conclude that there will be several stations between Sydney and Albury, as there will be also between Melbourne and Beechworth.

34. As to the working expenses as they are estimated here——? I believe they are ample as estimated there.

35. I will just enumerate them :

Salary of Superintendent.....	£800
Travelling expenses of do. ....	200
Accountant .....	400
Assistant Accountant .....	300
Two Station Masters, at £350.....	700
Eight do. at £300.....	2,400
Two Assistant do. at £250.....	500
Five Line-men, at £200 .....	1,000
Four Messengers, at £100 .....	400
Eight Messengers, at £78 .....	624
Expenses of maintenance and repairs to line .....	1,000
Rent of offices .....	2,000
Lights, fuel, stationery, &c.....	1,000

Total.....£11,324

This estimate you have seen? I have.

36. You think it is quite ample? Yes. I thought the rent of offices was rather in excess.

37. What are the line-men mentioned in the estimate? Men to traverse the line between the different stations, to see whether there be anything imperfect.

38. In the event of this Government determining upon the construction of a line of Electric Telegraph between Sydney and Albury, are you aware whether any persons would be ready to come forward to tender for its construction at once? I believe there would, immediately.

39. You are aware that there are persons who have already turned their attention to it? Yes, I am aware that persons in this Colony have done so, and there are likewise contractors in the other Colony who would most probably tender.

40. Then I gather from you, that, having carefully gone over the ground with a view to this particular work, you are of opinion that the line could be constructed within the estimate given here, or, at all events, for something under £100 a mile? It certainly could be, provided you modified the specification to the extent of using the growing trees, where practicable, instead of poles; but if the contractor were obliged to obtain poles of certain dimensions, and to undertake to perform every thing under the terms of the contract as in the printed forms, I question whether it could be done for the money. If you adopt a line of forest trees there might be a considerable saving on that estimate of £100 a mile.

41. In what time could the line be constructed from here to the Murray? If it were commenced during the summer season, so as not to be interfered with by floods or bad weather, and carried along a line of trees, it might take six months; but if you decide upon having posts, it would require nearly twelve months to complete.

42. Are you aware whether the necessary material could be obtained in Victoria? I could obtain the whole material within one week, instruments and all.

43. Would there be much difficulty in getting persons to take charge of it? I put that question to Mr. McGowan, and he replied that he could supply men who have been educated, in fact, under his own eye.

44. Then you think that a line of Telegraph could be constructed by the middle of next year from Sydney to the Murray, in a state of complete efficiency as to superintendence and fully at work, for a sum something under the rate of £100 a mile? I fully believe it, if you adopt the forest trees instead of the posts stipulated for in the printed specifications.

45. Or, in other words, it might be constructed the whole length of the line to Melbourne for £55,000? Very nearly so.

46. During your connexion with the Colonial Gold Company, you were resident in the western districts? Principally.

47. Would an Electric Telegraph be of any substantial advantage from here to Bathurst? I think if it be once started in the Colony it will be required by all the principal towns. There is no question as to the advantages that would result from it.

48. Do you think that an Electric Telegraph from here to Bathurst would be remunerative in the course of two or three years, from your knowledge of the growing importance of that district? I believe it might be.

49. By Mr. Cowper: According to your idea, a considerable additional income would be realised by the communication to Goulburn? Yes. I believe two or three stations might be made remunerative on that line, the distance being so considerable.

50. The estimates quoted by Mr. Parkes allude only to Sydney and Beechworth, but there are Goulburn, Yass, and other places where stations might be established? Precisely. I think you might have several stations along the line of road.

51.

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51. Have you made up your mind as to the points where those stations should be fixed? I could only suggest them. I presume you would require one at Parramatta, and all the important Railway Stations, such as Liverpool and Campbelltown, and certainly at Goulburn, Yass, and Gundagai.

52. *By Mr. Macarthur*: In what parts of the line do you consider there would be great difficulty in obtaining timber for posts according to the specification? On the greater portion of the line between Goulburn and Albury. There would be no difficulty, in this respect, between Sydney and Goulburn. But there would be great difficulty in making the line through some of the dense forests that exist between Goulburn and Sydney, if it were necessary to clear the large space of ground usually stipulated for in the contract.

53. You allude to Bargo Brush, I suppose? Yes. It would be very expensive to clear twenty feet on each side of the line in that dense brush.

54. *By Mr. Hay*: You were talking of attaching the wire to the trees—I suppose, in that case, it would be necessary to lop all the branches? All overhanging branches, and, in some instances, to take the top of the tree off.

55. Do you not think that unless the branches were removed from the trees near the line, accidents would be continually happening from their falling? Great care should be taken in the selection of the trees, and they should be only of certain sizes. I would not have a tree with a large overhanging top, that would be liable to be overturned with the wind.

56. Are you aware how far, in constructing the lines of telegraph in South Australia and Victoria, they have thought it necessary to clear the ground on each side when the line was carried through forest land? They did not appear to me to pay very particular attention to the clearing. The line has been constructed along the main road, and, therefore, one side is comparatively clear; but on the other side they only lopped off the branches.

57. *By Mr. Cowper*: What lines have they constructed in Victoria? One to the Heads by Geelong, and also to Ballarat, and another to Sandhurst.

58. *By Mr. Faucett*: Having gone over this line to Albury, have you seen a sufficient number of suitable forest trees for making the line? In many places it will be necessary to put up a few posts between the trees when the distance is too considerable; but there are trees along the whole line of road that might be made use of, though you could not make use of them entirely.

59. Then, as I understand you, the forest trees would only partially assist in making the line? The use of these trees would be very considerable; posts would be the exception.

60. But still the posts would form a very large exception? Very large.

61. Have you considered what the additional expense would be in consequence of supplying poles wherever requisite—how much would it exceed £100 a mile? I conceive that if you allow the contractor the option of using the forest trees, you will have the line constructed for a less sum than £100 a mile.

62. *By Mr. Cowper*: Are there any particular parts of the line where there are many miles of plain on which there is no timber at all—is there any portion of the line where no timber is to be got without carrying it many miles? I could not tell you what distance the poles might have to be conveyed, because we did not go into the bush to make observations. We only made our observations along the main line of road, and inquiries at different places; and I presume, from what we were told, that on a considerable part of the line between Goulburn and Albury the posts would require to be conveyed perhaps twenty-five or thirty miles. In some places it will be necessary to put posts entirely, because there are no trees at all.

63. *By Mr. Faucett*: Taking all these circumstances into consideration, the spaces where there are no trees, and allowing the contractor the option of using poles or trees wherever he found the trees available,—the cost, in your estimation, would still be under £100 a mile? It would.

64. That would include the expense of conveying the poles to the different places where they might be required? Yes.

65. *By the Chairman*: Of what size would it be necessary to have the poles? According to the usual specification, they should be about six inches in diameter, and twenty-five feet in length, seven feet being sunk in the ground.

66. *By Mr. Hay*: I suppose it is not necessary that they should be quite straight? No, it is not. Many of the poles in Victoria are not perfectly straight. It is only a question of appearance.

67. Can you mention any part of the line where you would have to cart such timber twenty-five miles? At several places our inquiries led to that conclusion, and I ventured to name that distance as a sort of average conception of what we might have to do along the line of road from Goulburn to Albury. In some places where there are ridges, timber might be obtained close to the line; but there is a great deal of flat country between Albury and Goulburn, where none of the ridges afford suitable timber. There were very few isolated places where we could see suitable timber.

68. You might not have seen it from the road, but it does not consist with my knowledge of the country that there are many places where you would have to cart it twenty-five miles? We did not receive satisfactory information to the contrary, from a great many people of whom we inquired.

69. *By Mr. Macarthur*: Are you aware whether, in any part of the Victorian lines, they have substituted growing trees for poles? Mr. McGowan informed me that he had done so, when he wished to throw the line to a greater elevation; but the specifications are for poles only. He said that the line might be made equally efficient by means of forest trees.

70. *By Mr. Hay*: Have you taken into account the necessity of charring the posts before placing them in the ground? Yes.

71. What is the distance from post to post? There are thirty posts to a mile; that is about sixty yards apart.

72. Do you know to what distance on either side the trees are cleared away, in carrying a line of Electric Telegraph through forest country in America and elsewhere? I think the specifications usually mention twenty feet on either side the line; but you must be aware that twenty feet would be very little protection if a tree were to fall.
73. Or even in a gale of wind when branches might fall? Every branch that threatens danger should be removed.
74. By falling perpendicularly? Or by being blown a short distance. Twenty feet is a very short distance, but the expense would be excessive if you were to require much more.
75. *By Mr. Faucett:* When you speak of clearing, you mean merely felling the trees, not taking out the stumps? That is all.
76. Would you suppose that the revenue arising from this line of Telegraph, if completed, would be twelve per cent. on the amount expended? That is an estimate made by Mr. M'Gowan, the Superintendent of Telegraphs in Victoria, calculating the number of messages that might be passed from place to place.
77. Has he calculated from the actual result of any Telegraph in Victoria? I presume he has. I have submitted that estimate to mercantile men here, who seem to conceive the number of messages not over estimated.
78. *By the Chairman:* Have you travelled along any of the lines of Electric Telegraph in Victoria? I have travelled along the line from Melbourne to Sandhurst.
79. Does that go through a timbered country? Part of it is heavily timbered.
80. Was Mr. M'Gowan, or any one else connected with the Telegraph, in your company? *Not* at that time.
81. In your conversations with persons connected with the Telegraph there, were you ever told of any outrage or accident to the line? I never heard of any outrage having been committed; but I heard of a tree having fallen and broken the line to Geelong.
82. Do you know what was the extent of the damage, as to the delay of the communication, and as to the cost of repairing it? The cost of repair was insignificant, beyond sending a man to mend the wire.
83. I suppose there would not be more than a delay of a day or two in the communication? There could hardly be more.
84. *By Mr. Hay:* How is the wire united in case of accident? A small instrument is used for the purpose of bringing the two ends together, drawing them, and lapping them over and soldering them together. It can be done in a very short period of time.
85. If, in passing through forest country, the wire were broken in several places, would it not be attended with considerable delay? A new piece of wire might be run as fast as two or three men could work at it.
86. *By Mr. Cowper:* You spoke of line-men being employed to go up and down the line—would it not be their office especially to ride up and down to find out where these accidents had happened? It should be a duty of the police to report any accident. It is well known at the office when any accident has happened, because there is an instant stoppage of the communication.
87. I thought the line-men were employed for that purpose? They are for something of the kind. They patrol the line, and do any particular work that may be required from time to time; but when there may be fifty miles or more between the stations some delay might easily occur.
88. *By the Chairman:* What height is the wire raised from the ground? About eighteen feet, or a little more. The posts are twenty-five feet long, they are sunk seven feet in the ground, and the insulator is placed on the top of them.
89. Then no mischievous person could disturb the line without some considerable trouble? He would have to destroy the post.
90. *By Mr. Faucett:* It could not be done unintentionally? No. There might be one advantage in using the forest trees, that heavier wire might be made use of than that usually adopted; and the heavier the wire the better for the communication.
91. Would that add to the cost? Not materially.
92. *By the Chairman:* Supposing a line of Electric Telegraph to be constructed to the Murray, to what point on the Victoria side would there be a line soon constructed? There would be a line direct from Melbourne to the bank of the river opposite Albury.
93. To any other points? It would go to Melbourne by way of the McIvor diggings and Kilmore.
94. *By Mr. Hay:* Would the line go to Beechworth? I am not quite certain, but I conclude it would.
95. *By the Chairman:* How many miles did you say it is from here to Albury? The post makes it 367.
96. Then we may set down the expense of constructing this line at something like £38,000? That would certainly cover the expense.
97. From your knowledge of the Western District, what do you think would be the relative expense of constructing a line to Bathurst? I think the line to Bathurst might be constructed at a cheaper rate, because there are greater facilities for conveyance, and a population that could be employed on the work. There would be great difficulty and expense in obtaining labour, and in conveying men and stores about on the line to Albury, which difficulties would not be encountered on the Western Road.
98. What per cent. reduction would you make on the cost as estimated to Albury on that account? I dare say it might make a difference of something like one-fourth—twenty-five per cent.
99. That is to say, the line from Sydney to Bathurst could be constructed for £75 a mile if the other could be constructed for £100? I believe it might. There is a great deal of timber on the Bathurst Road that would be suitable for the purpose. In fact it is better timbered for that purpose than the other line of road.

E. J. Spence,  
Esq.  
2 Dec., 1856

- E. J. Spence, Esq. 100. *By Mr. Cowper*: What is the distance to Bathurst? I think it is 113 miles according to the mile-stone, but we always call it 120
101. *By the Chairman*: If the Government were to decide upon constructing a line of Electric Telegraph, would you be inclined to tender for it? I would.

2 Dec., 1856.

FRIDAY, 5 DECEMBER 1856.

Present:—

MR. IRVING, | MR. MACARTHUR,  
MR. PARKES.

HENRY PARKES ESQ., IN THE CHAIR.

Saul Samuel, Esquire, called in and examined:—

Saul Samuel,  
Esq.

5 Dec., 1856.

1. *By the Chairman*: You have been paying considerable attention lately to the subject of constructing an Electric Telegraph between here and Melbourne? I have.
2. Will you have the kindness to state to the Committee about what time this subject has occupied your attention? About six months. I have paid two visits to Melbourne in consequence.
3. Did any particular circumstances attract your attention to it in the first instance? Yes. It was first suggested to me by a friend, who is a large, and, I believe, the only importer of wire and telegraphic instruments; in fact he has imported them for the Victoria Government. He applied to me and my friend Mr. Spence, to move in the matter here, with the endeavour to get either the merchants or the Government to take it up. In consequence I turned my attention to the subject, and endeavoured to ascertain the practicability, as well as the advisability, of establishing a line of Telegraph in this Colony.
4. What were the steps first adopted by you with that object? The first step I took was to visit Melbourne, to ascertain the manner in which the line was constructed there, and also the mode of working it. Mr. Spence and myself acted jointly. We placed ourselves in communication with Mr. McGowan, the Superintendent of Electric Telegraphs in Victoria, who very kindly furnished us with all the information in his power, and we then determined on calling the attention of the Government here to the matter, thinking it much better that they should take it up than that it should be left to the merchants of Sydney to do so, particularly as the Government of Victoria were already acting in the matter, and had constructed a considerable amount of Electric Telegraph.
5. Was this on the occasion of your first visit? Yes.
6. What followed? I then communicated with Mr. Donaldson, who was at that time Premier, and he expressed his anxiety to take the subject up, and thought the Government were willing to do so. I also communicated with Mr. Cowper afterwards, and with Captain Towns and other merchants of the City, and in consequence of the great desire evinced to see a line of Telegraph in operation, we determined upon going overland to Melbourne, to make ourselves acquainted with the line of country, to see whether a line of Telegraph really was practicable, and whether it could be done at such a price as to induce the Government to take it up.
7. Was your object at this time to undertake the construction of the line as a private speculation? We thought in the first instance that it would be advisable to get up a company for the purpose, but afterwards we came to the conclusion that it would be better that the Government should do it, and we thought of getting the contract for its construction from the Government, having the whole of the instruments and wires at our command, through our friends.
8. The result was that you determined to go overland to Melbourne, with a view of ascertaining for yourself the practicability of establishing a line of Telegraph? Exactly.
9. Will you have the kindness to state, in substance, your experience on the line of road to Melbourne, and your opinion of the practicability of the work, its utility if constructed, its probable cost of construction, and the probability of its being remunerative? It certainly is practicable, there is no doubt about that, but I think that instead of adopting the plan pursued in Victoria, of carrying it on by a line of posts, it might be more advisable, as being more economical, to construct it by means of the forest trees. In some places it will be compulsory to use posts in carrying it across plains, or where the country is thinly timbered. A line of trees would certainly be more economical, for in many places there would be considerable difficulty in getting posts; they would have to be carted a considerable distance, and the ground in which they would have to be placed, being in many places hard rock, would involve great expense in sinking. Altogether, I think, the forest trees present great advantages; it might be done more expeditiously, and certainly at less cost. The advantages of an Electric Telegraph to Melbourne would be very great,—one of the greatest would be the very speedy communication between the merchants, which would tend greatly to benefit the commercial interests of the country. Then, again, it would act as a check to crime, and would assist the police immensely; in fact it does in Victoria. By adopting the forest trees I certainly think the cost would not exceed Mr. McGowan's estimate, which is £85 a mile from here to Melbourne, exclusive of wire and instruments.
10. *By Mr. Irving*: In speaking of the forest trees, would you understand hardwood? Of course you must take the trees as they come. I do not see why a gum would not stand as well as another tree. You would take the top off, and fix the insulator to which the wire is attached to the side of the tree instead of the post.
11. *By Mr. Macarthur*: You do not propose to kill the trees? No; I think they would stand longer if they were not killed.
12. A gum tree would stand better? I think the principal timber we should have would be stringy bark and box. If posts were adopted, I should not think of taking gum, because the timber would not stand, unless it were blue gum, which you could not get in that country.

13. What wood would you generally get in the western country? I think you would get stringy bark and box all the way. Saul Samuel,  
Esq.
14. What I mean by the western country is the country away from the sea-coast beyond the dividing range? I would take box if I could get it; it is the most durable timber. 5 Dec., 1856.
15. There is the same description of forest nearly all the way to Victoria? Yes. The difficulty is that the timber is not straight, and therefore I would adopt the forest trees, as the posts would have to be carted a considerable distance, though it would not be quite such an elegant construction as if the posts were all symmetrically arranged in a perfect line.
16. *By the Chairman:* There are no peculiar impediments in the way of the construction of a line of Telegraph? None whatever. The only difficulty would be one which happens in every country where the line is carried through forests, the occasional interruption of the communication from trees falling across the line.
17. You have taken into consideration the clearing of the line for a short distance on each side of the wire? The road would form a clearance on one side, and on the other side any branches that presented immediate danger should be cut down. But in many places it would be utterly impossible to clear the whole of the trees at any distance from the line. I would mention the country near Bargo, which is a dense stringy bark forest, running close up to the road; nor indeed do I look upon it as necessary; in Victoria they do not do it.
18. The very density of the growth would be a protection against serious accident, would it not? To a great extent. There certainly is no great impediment to the line. This would be a difficulty, but it is one that prevails in every other country where the wire is carried through forest country. In America, in 1853, they had 30,000 miles of Electric Telegraph, and that all carried through forest.
19. From your examinations and inquiries, you are of opinion that a line could be constructed from here to Albury at a rate under £100 a mile? I think you might safely calculate that it could be constructed at £100 a mile, and if the forest trees are used instead of posts, under that sum.
20. You have been a number of years connected with trade in Sydney? I have.
21. And also more or less with the trade of the other Colonies? Yes.
22. Have you any intimate relations with the trade of Melbourne? To a certain extent.
23. Do you think, from your knowledge of the amount of mercantile communication, that a line of Telegraph between here and Melbourne would pay its expenses? Mr. McGowan has furnished you, I think, with an estimate of the probable cost of working it, and the probable revenue, and I have been looking at that, and I do not think it has been over-estimated. I will go into the detail of his estimate if you will allow me. He says there will be about 50 messages each way daily between Sydney and Melbourne; now I do not think that is at all over-estimated, taking into consideration the press.
24. That is exclusive of the press? That is exclusive of the press; that is not calculated at all; but taking that into consideration, for it would perhaps make up for any deficiency in the presumed amount of mercantile messages, I do not think the number is over-estimated. He reckons 20 messages from Melbourne to Beechworth, and I certainly think between those two places they would far exceed that number. 20 from Beechworth to Melbourne is a moderate calculation; but 20 from Sydney to Beechworth I think is too much, though the amount is insignificant, and might very well be put out of the calculation. I do not think, taking this estimate as a whole, that Mr. McGowan has over-estimated the number of messages daily. On the contrary, I think he is rather under than over the mark. If we were hereafter to reduce the charges he sets down here, (these would do to start with,) perhaps the same thing would occur as in America, namely, that the desire to communicate in this way would increase, and consequently the profits would increase also. There is one suggestion I would throw out to the Committee and to the Government, which I think is important. In a communication I had with Mr. McGowan I put it to him whether it would not be possible for him to take the superintendence of the whole of the line between Melbourne and Sydney<sup>9</sup> which idea he fell into. It occurred to me that it would be desirable, because it would lessen the expense to the two Governments, which, perhaps, is the least of its advantages, and because there would then be an uniform system of communication. You would have the same cyphers, which indeed would be inevitable, and you would also be able to procure competent men to work the instruments, whom he would furnish, he having instructed a number of young men under his own eye. You would also have the advantage of his great experience, and altogether I think it would be the best arrangement that could be entered into, to give him the management of both lines in the two Colonies.
25. If Telegraphic communication were established through Victoria, with Van Diemen's Land and South Australia, would not the number of messages along our line be greatly increased in consequence? No doubt of it. Of course you are aware that the South Australian Government are now moving actively in the matter. They have their line surveyed; and Mr. Todd, the Superintendent of Telegraphs in South Australia, whom I met in Victoria, (indeed he was present at most of our communications with Mr. McGowan,) has reported upon the practicability of it, and the Government intend taking it up immediately.
26. Looking at the question of constructing this line of Electric Telegraph with the ultimate view that it will, within a very short distance of time comparatively, connect us with Adelaide, Launceston, and Hobart Town, as well as with Melbourne, can there be a doubt as to the certainty of its very soon repaying the cost of its construction, as well as the working expenses, by the increased traffic along it? Not in my mind. I am perfectly satisfied it will very speedily return the cost of its construction.
27. And of course it will very much facilitate all mercantile operations with Victoria, South Australia, and Tasmania? Yes, no doubt of it.
28. On the other hand, when the other Colonies have constructed lines of Telegraph, we, being left out, should be at a great disadvantage? We should; more particularly as the Murray

- Saul Samuel,  
Esq.
- 5 Dec., 1856. Murray is now being navigated, and the Adelaide people have the advantage of sending supplies by water, whereas we have to send them over bad roads, with considerable difficulty.
29. After the consideration you have bestowed on the subject, and your experience as a mercantile man, are you of opinion that it is a work of urgent necessity for the Colony? I am. I think it should be commenced immediately. The Government of Victoria would be quite ready to meet us on their side, for on our trip overland we met the Surveyor on the Victoria side close to the river, he having just marked out the line for the Electric Telegraph from Melbourne to Albury. It was originally intended to construct the line from Sandhurst to Belvoir, but now they have determined on carrying it direct from Melbourne to the Victoria side of the Murray.
30. You have resided for some years in the Western District at or near Bathurst? Yes, I have resided in the Wellington and Bathurst country a great number of years.
31. You are well acquainted with that district and the intermediate districts? Yes.
32. Do you think it would be a desirable thing to connect Bathurst with Sydney by an Electric Telegraph? I think it would be most desirable, more particularly as I believe we have vast gold fields there which will be thickly populated before many years are over. It is a very important district; trade is increasing rapidly, and the country becoming very thickly populated. I believe a line of Electric Telegraph to Bathurst would not only pay, but could be constructed at much less cost than to the southward.
33. It has been stated by Mr. Spence, in his evidence before this Committee, that on account of the greater degree in which the line of road to Bathurst is settled, labor could be obtained more easily, and therefore the line could be constructed at considerably less expense? I think it could be constructed for less, but I am not prepared to say how much, more particularly if the forest trees are adopted; but if posts are adopted it would be an expensive line, because the country is all rock over the mountains. There would be a less distance to cart the material than there would be from here to Albury, and altogether the advantages for construction are greater to the westward. I believe the line would pay very well; in fact, the sum it would cost would be so small, that a very small return would repay the outlay.
34. Is there any other point to which you think it would be advisable to make a line of Telegraph? I think after a line is constructed to any particular point a desire would prevail in every portion of the country to have it, and I believe the price at which it could be constructed is so moderate, and the advantage to be derived so great, that lines to all parts of the country would speedily be taken up. I do not see why they should not be taken up by private enterprise, in the same way as in America, where there are rival Telegraph Companies; but for my own part, I would rather the Government should take it up than any private company.
35. Is it within your knowledge that a contract for the construction of a line of Electric Telegraph could be at once entered into? Yes. I may say that Mr. Spence and myself would be prepared to contract for its construction.
36. If tenders were invited you would be prepared to send in a tender? We should.
37. There would be no difficulty in getting proper persons to superintend the working of the Telegraph when once constructed? I do not think there would be the slightest difficulty. We put that question to Mr. McGowan, and he pointed out to us that he was opening fresh lines, and had young men perfectly competent, whom he had taught himself.
38. What instrument has been used in Melbourne? Morse's Recording Instrument. It is very simple, and the use of it is easily learnt. It is the one with which only one wire is required for communicating with a great number of places.
39. Is it the same class of instruments that are now obtainable, as you have mentioned, in Victoria? Yes.
40. *By Mr. Macarthur:* Are you aware whether any steps have been taken towards carrying a line of Telegraph from Melbourne to Tasmania—whether any surveys have been made, or any measures taken to determine upon the line? I may mention that the line between Hobart Town and Launceston and George's Town is now in course of construction; and when I was in Victoria Mr. Champ, the Colonial Secretary of Tasmania, was there, and I was informed, this was one of the subjects that he was treating with the Government about. As far as the two Governments are concerned, I believe it is settled that there shall be a line of communication from Queenscliffe in Victoria, to King's Island, and then across the island to the nearest point on the coast of Van Diemen's Land.
41. Will any great extent of sub-marine Telegraph be required? Sixty miles, I think, to King's Island, and about the same to Cape Grim. I have noticed that the Acting Governor, in his speech to the Legislature refers to that; he mentioned that it is the intention of the Government to construct lines of Telegraph to the borders of Victoria, and to place themselves in communication with the Governments of the other Colonies, with a view to connecting them with Melbourne by means of the Electric Telegraph. Mr. McGowan mentioned to us, in the last interview we had with him, that in this month or next, they intended to advertise for tenders for the construction of the lines both to this frontier and the Adelaide frontier and that the Government intended doing that, and taking the chance of getting the money voted, they were so confident that the amount would be voted by the Legislature.
42. I suppose they have not the materials at present for a sub-marine Telegraph? No, but they have been sent for; the gentleman to whom I referred before, has sent for them, and he supplies the Government with them. In fact, he has undertaken the construction of the line in Van Diemen's Land. He has taken it at a moderate price, his anxiety, being a large importer of the material, is to get Telegraphs generally adopted. The country in Tasmania presents great advantages for the construction of a line; they have a beautiful road across the island, and fine timber; in fact, they can fall one tree of sixty or seventy feet in length and get three posts out of it, which presents great facilities; whilst on our side, we have great difficulty, in most places, in getting the proper description of timber. I have not met with any authority upon the subject, but I have heard from Mr. McGowan that in Canada  
and

and the United States great lengths of Electric Telegraph are constructed upon the forest trees. Saul Samuel,  
Esq.

43. Mr. McGowan states the expense of maintenance and repairs to the line at £1,000 yearly; I suppose you have scarcely had an opportunity of forming an opinion on that point? 5 Dec., 1856.

No. It would entirely depend on circumstances. There would occasionally be casualties happening. I think the police might assist in keeping the line in repair, and I think some arrangement might be made with the publicans along the line of road; there is a public house about every ten miles, and it would be very easy for them to undertake it; they have generally a spare man about the place, and it would only involve the necessity of sending him now and then each way along the line. The wire is very easily repaired.

44. It is probable that this estimate has been formed from Mr. McGowan's experience in Victoria? Yes. I think the expense of repairs would hardly be so heavy here. There is one item in that estimate which I think very high, £2,000 for rent of offices. In Sydney £2,000 would build offices sufficient for the City alone. Of course offices would be required at every place where there is a station, and there should be a sleeping apartment for the man in charge and a messenger; and it would be necessary that there should always be a man on duty, even during the night.

45. Building is by no means so expensive in this Colony as it is in Victoria? No, by no means. At Goulburn you could always rent a cottage, but in Sydney it would be desirable to build a place, or you might rent rooms in the Exchange, which would be a very proper place. I think £250 a year would rent suitable offices, for a small house anywhere in the centre of the City would do. All the clerks need not reside in the place—only the chief clerk, and always one clerk to attend to the communication. I think it would be a most excellent arrangement, if it could be carried out, as I before suggested, to give Mr. McGowan the superintendence of the whole line, as he understands the subject so well; and could furnish you with competent men, who might be prepared in the Telegraph offices at Melbourne. That of course is a matter for the consideration of the two Governments; but it would be most desirable to have an uniform system of communication, with the same instruments and the same mode of insulation.

46. Wherever a railway runs I presume you would recommend that the Electric Telegraph should follow it? It is absolutely necessary, so that in case of accident on the railway immediate assistance might be forwarded, or in case of any interruption of the line immediate notice could be given at the various stations, so as to prevent accident.

47. *By the Chairman:* Have you examined the insulators used on the line in Victoria? I have.

48. Of what kind are they? Merely of earthenware, on the top of a wooden peg, which is prepared with a composition so as to make the wood a non-conductor.

49. Are they quite effective? Quite effective. Of course if we adopt a line of trees we shall have to adopt a slightly different mode of fixing the insulators; they are placed on the tops of the post, but must be attached to the sides of the trees.

50. I thought they were generally attached to the side of the posts, and protected by a small roof-like projection? Some few are, but not generally; they are usually on the tops of the posts. Earthenware is such a capital non-conductor that it is generally adopted for insulators.

Arthur E. Dodwell, Esq., called in and examined.

A. E. Dodwell,  
Esq.

1. *By the Chairman:* How long have you been in this Colony? About nine months.

2. You came here from England? Yes.

3. In England you were employed in connexion with the Electric Telegraph? Yes.

4. This Committee has been appointed by the Legislative Assembly to inquire into the subject of the Electric Telegraph generally; and they would feel obliged if you would state, for their information, where you were employed, and how long you were employed in connexion with the Telegraph in England? I entered the service of the Electric Telegraph Company, as nearly as I can recollect, in the middle of 1847; that was at the commencement of the Electric Telegraph Company's operations. In the first instance I was engaged in the Engineer's Department, and there, of course, had an opportunity of becoming acquainted with the uses of the instruments, as well as the construction of the lines. I subsequently came to Adelaide and Port Phillip, and, after a short stay, returned to England and re-entered the service; going to Birmingham after a short time, as Manager of the Station there, and also of the Midland District.

5. How long did you remain in the capacity of Manager of the Birmingham Station? About fourteen months.

6. What instruments were used in connexion with the Electric Telegraph Company's lines? The double needle Telegraph; Cook and Wheatstone's Patent, principally.

7. Can you inform the Committee what is the extent of the Telegraphic communication in England—the number of miles? I really cannot at the present moment say exactly; it would involve a reference to Bradshaw's Guide; any one could see it there.

8. You could not, from your own private information, give any statistics to the Committee, as to the extent of Telegraphic communication in England, in point of distance, and also in point of business done? It would be impossible for me to give any answer of any worth, at the present moment.

9. You said you had been at Port Phillip? Yes.

10. Was the line of Telegraph between Geelong and Melbourne in operation then? Nothing was thought of it then.

11. In what year was this? In 1851.

12. Has your attention been directed to the subject of uniting the different parts of these Colonies by electric communication? Yes.

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- A.E. Dodwell,  
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13. The line between Sydney and Melbourne, for instance—has that engaged your attention? Yes, I have thought of it, seeing that the subject has received some consideration.
14. Have you formed any conclusions in your own mind as to what would be the best course for establishing a line between here and Melbourne? With regard to the route, I think the better plan would be to make use of the Railway Survey, and let the line be laid so that it could be followed by the railway, on its being extended. I think the principal towns should have the facilities afforded by the Telegraph, for police purposes, as well as for general matters of business.
15. Does your practical knowledge of the working of the Telegraph in England enable you to give any estimate that would be at all valuable, as to the construction of a line between here and Melbourne? I have roughly estimated the cost of a line from here to Albury, (which I take to be 315 miles) including the cost of the necessary stations and apparatus, to be about £30,000.
16. Did you give the matter much consideration in forming this estimate? I did. The first thing I calculated was the probable cost of the conveyance of stores; and for that purpose I made inquiry as to the cost of carriage, and also with regard to the kind of country through which the line would have to pass; because it is a well known fact, that a great part of this line is destitute of the quality of timber that could be used for posts and poles, and these would have to be drawn from a distance and set up. I have therefore, with regard to this point, taken into consideration the cost of labor and carriage. The cost of insulators, to be purchased in England, and instruments also—either Cook and Wheatstone's or Morse's, would be about £9 each. Then there is the cost of stations, setting up desks, and so on. I have taken some little trouble to put it together, and I think that £30,000 for 315 miles will not be far wrong.
17. In your calculations, did you contemplate using forest trees instead of posts, to any extent? No, the erection of posts in every case.
18. Have you had any suggestions made to you, as to the desirability of making the forest trees available as they stand? Yes, I have heard it suggested.
19. Do you see objections to that? I see many objections to it.
20. Will you have the kindness to state those objections? In the first place, many trees will fall without the slightest notice; young trees frequently fall in the bush because the roots have not a solid hold of the ground; old trees are objectionable to fix anything to, and I think it would be no saving whatever. I should be disinclined, in fact, to make use of the old trees.
21. You think there would be greater liability to accident from trees falling? I think the falling of the trees would be one objection. It suggested itself to me that there was no necessity for any scheme of that kind, and that it had its disadvantages.
22. It was thought it would be economical to make the live trees available where they present themselves? Experience would be the best guide in such a matter; but I think, unless it has been done at present, very little value could be attached to the suggestion.
23. It has been given in evidence that it has been done to some extent in Victoria? If to any great extent, and if any saving has been effected, it may be worth consideration; but I had not heard that such has been the case, and therefore I dismissed the matter from my mind.
24. In your calculation did you go upon the basis of importing all the material direct from England? With regard to insulators and instruments, yes.
25. You had no information before you at the time that there was sufficient material—wire, instruments, and insulators—in Victoria for the purpose? I have not heard it.
26. The instrument now being used in Victoria is the one known as Morse's Recording Instrument? Yes.
27. Do you think that is as good for the purpose as any other? Undoubtedly it is a good instrument—it has been used for years; but the Electric Telegraph Company did not use it. The instrument is a very good one. I think it might be worked very well indeed here; but I consider defective insulation and obstructions are more seriously felt in its use than in the use of the Double Needle Telegraph. It is more liable to defect and obstruction.
28. Will you have the kindness to state what is the difference in the mode of insulation between Morse's instrument and the one to which you have referred? The insulation must be the same. When I say greater care must be taken, I mean that obstruction in the case of Morse's Telegraph would be of more consequence than any contact where the Needle Telegraph was used. With Morse's instrument you receive the message by means of signs, (dots and strokes on paper), and with the Needle Telegraph by the movement of the needles. You are more easily able, in the event of any contact between two wires, or any obstruction from atmospheric influence, or anything of that kind, to make out what the clerk has sent you from the needle instrument than from the printing instrument, because the signs would be running into each other in such an absurd manner that you could make nothing of them. In the event of contact, when the double needle instrument is used, you could disconnect one wire, and work a single needle.
29. Is there any material difference in the cost? The cost is about the same.
30. Is the cost of superintendence the same? The cost of superintendence in any case would be the same.
31. You have some acquaintance now with the community of Sydney and the Colony generally—do you think an Electric Telegraph between Sydney and Melbourne would be remunerative, according to your experience of the business done, in comparison with the dense population and great traffic of England? Simply between Melbourne and Sydney it would not be of such very great value, but when it connects this Colony with other Colonies, I think it will be found greatly conducive to commercial convenience.
32. You are aware that steps have been taken to connect Victoria with South Australia and Tasmania, by means of the Electric Telegraph? I am.

33. Are you of opinion that if this proposal be carried out, and New South Wales be excluded from the system, we should be at great disadvantage—in fact, that it would be absolutely necessary, if these other Colonies were connected, that we should be included in that system? I think it would be greatly to be deplored if New South Wales should be cut off from the benefits that would arise from Telegraphic communication. The other Colonies would enjoy great and undoubted benefits, both social and commercial; and it would be an absolute loss to this community if the other Colonies were to outrival it in this respect.

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34. What I meant more particularly was this—that in all ordinary mercantile operations, in the transactions of business between the mercantile men of the respective communities of these four Colonies, we should be placed at a disadvantage which nothing could compensate, if we had not the same means of communication as they would have, if any system of this kind were originated? I think so, decidedly.

35. The fair competition of trade would be seriously interfered with? I think it would be, detrimentally to this Colony.

36. *By Mr. Macarthur:* Supposing all the other principal cities of Australia to be in communication by means of the Electric Telegraph, and Sydney to be shut out from that means of communication, would it not exclude her from being the commercial emporium of this part of the world? I think so, certainly; but the experience I have of the Electric Telegraph would not enable me to give such an answer as a Colonial merchant would be able to give; he would be better acquainted with the nature and extent of the trade between this and the other Colonies, and he would be able to form some idea of the probable consequences of our communication being so much more protracted than that of the other Colonies, and whether the amount of business would not consequently suffer, while in the other Colonies it would be likely to increase.

37. *By the Chairman:* Would you state to the Committee what was the character of the greater number of messages sent by the line of Electric Telegraph, on which you were engaged, between Birmingham and London, Manchester, Liverpool, York, and the other places with which it was in connexion? Between Birmingham and London the messages were of a varied character; they related to the Stock Exchange business and to manufactures; there were a great number of private messages and police messages; but the market reports formed the principal messages that passed between Birmingham and the other principal cities and towns.

38. Were the messages customarily of a social or mercantile character? By far the greater proportion were mercantile.

39. I suppose there was a fluctuation in the number of social messages? Yes.

40. And a still greater fluctuation in the police messages? They certainly varied in number at times. The police messages were exceedingly frequent. Birmingham, from its central position, is liable to have messages pass through it from, and to, every part of the country. The number of police messages varies greatly with the state of the surrounding districts. If the manufacturing districts are disturbed police messages are very frequent. Races also generally increased the number of police messages; and there were at such times a great number of sporting messages sent by the Telegraph.

41. *By Mr. Macarthur:* The Telegraph was used, I suppose, for communications of public interest generally? All the public news used to come by it from the Stock Exchanges and the Corn Markets; also extracts from the London morning papers, and anything interesting in the second and third editions; then there were communications from the continent by the Sub-marine Telegraph; all used to come down to Birmingham as the receiving point, to be transmitted to other places—Chester, Manchester, Warwick, and many other places.

42. *By the Chairman:* You do not know anything about the mode of construction and management of the Electric Telegraph in the United States? No, I do not, excepting as to some portions of their apparatus. I have seen specimens of glass insulators, and so forth, but that was some years ago; they may be different now.

43. Did you come out to the Colony with any view of being in any way connected with lines of Electric Telegraph here? No, I had no idea of it.

44. Your estimate, I find, is about £95 a mile for the line from here to Albury? About that.

45. Have you any further information which would be valuable to the Committee, or any other suggestions to make with reference to the mode of construction or management of lines of Electric Telegraph in this Colony? I should recommend, in the first place, that the Superintendent should be appointed by the Government, and that the contract be carried out under the supervision of that officer, so as to afford the Government a collateral guarantee for the proper performance of the contract. Uniformity in system is of infinite importance, and I think that the Superintendents of the Telegraphs in the various Colonies should meet (say quarterly) for the purpose of discussing all points that might arise, upon which a mutual understanding should exist, and for facilitating and improving the working of the system as regards economy and simplicity. A competent and vigilant superintendence, supported by a very stringent Act, would, I think, be ample protection against wilful injury to the line. Each Government Department using the Telegraph might be charged annually with a fixed sum, in consequence of which all messages on public service might be sent at any time when duly signed by authorized persons. A reduced tariff should exist for press messages. It appears to me that many subjects, both engineering and commercial, connected with the construction and management of a Telegraphic system, have not been alluded to in the correspondence relative to the Electric Telegraph lately published; I, therefore, beg to state, in conclusion, that in the event of Telegraphic communication between this and the other Colonies being decided upon, I shall be happy to afford my best assistance.

WEDNESDAY, 10 DECEMBER, 1856.

## Present:

MR. COWPER,  
MR. IRVING,MR. MACARTHUR,  
MR. PARKES.

## HENRY PARKES, ESQUIRE, IN THE CHAIR.

J. Thompson,  
Esq.

John Thompson, Esq., Deputy Surveyor General, called in and examined.

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1. *By the Chairman:* This Committee has been appointed to consider the subject of communication in the Australian Colonies by Electric Telegraph, more particularly in reference to the steps taken already in constructing that means of communication in Victoria. The inquiry hitherto has been confined exclusively to the advisability of connecting Sydney with one or more remote points of our own Colony, and with the Colony of Victoria, with a view to a complete system of communication with the Colonies of South Australia and Tasmania. I believe the subject has occupied your attention for some years past? It has.
2. In a more enlarged degree,—you view taking in the ultimate connexion of Europe with the Australian Colonies by means of the Electric Telegraph? Yes.
3. Will you have the kindness to state to the Committee your opinions, in the first place, as to the desirability of at once constructing an Electric Telegraph so as to unite this Colony with Victoria, and bring it within the system of communication intended to unite the three Colonies of Victoria, Tasmania, and South Australia? I think there can be no doubt of the advisability of that.
4. Supposing we have documents before us, and evidence given by witnesses in this room, that the three Colonies of Victoria, Tasmania, and South Australia, will be united within a short time, in all probability by this means, and supposing that New South Wales should be left out of the system—do you think we should suffer serious disadvantage by being so omitted? I should think so, decidedly.
5. You have not thought particularly on that branch of the subject? No; I have not given my attention particularly to the communication between the Colonies.
6. It appears to you self-evident, that if the other Colonies were united by this means of improved communication, it would become absolutely necessary for us to be taken into the system, or else we should be serious sufferers? Certainly. I think Telegraphic communication between Sydney and Melbourne is indispensable and of the first importance.
7. Will you have the kindness to state connectedly what your views are about constructing an Electric Telegraph by way of the Gulf of Carpentaria, I believe, so as to unite these Colonies with Europe? In the first place, I think it proper to observe, that we ought to take Brisbane into consideration in our colonial arrangements, so that the northern part of the Colony may have the advantage of communication with South Australia and Victoria too.
8. Are you of opinion that that is immediately necessary? It appears to me to be as necessary as the communication with South Australia.
9. That would be carried out, not by any effort of our own, but by the Government of Victoria and South Australia—if we become united with Victoria we also become united with South Australia, without any effort of our own? Yes, so I understand; the only outlay at present will be for the line between Sydney and Albury.
10. Does it not occur to you that the construction of a line of Telegraphic communication with the capital of the new northern Colony might be deferred as a secondary consideration until our communication is established with more densely populated communities? Undoubtedly, but I do not think it should be entirely lost sight of.
11. Will you state your views with regard to extended communication with India and Europe? The Committee will perhaps be aware that there is a Company established in England which is called "The Mediterranean Electric Telegraph Company from London to Bombay, and from thence *via* Calcutta to Australia," with a view to the extension of that means of communication to Australia, and that they purpose carrying the line to Sydney. It appeared to me that, with that knowledge, the Committee could not overlook the circumstance, that in a few years we should be able to have electric communication with London, and that we might ourselves facilitate the establishment of that means of communication. For instance, the East India Company propose to give £30,000 per annum for the use of the Telegraph, and France and Sardinia have each guaranteed five per cent. on the outlay for that portion of the line which passes through their respective territories; and it would be possible, I think, for the four Colonies, namely, New South Wales, Victoria, Tasmania, and South Australia, to do so likewise, or, by united effort, to carry the Electric Telegraph to Port Essington, so soon as the progress in India has brought the line as far as Singapore.
12. Do you mean, to carry the communication from the Australian Colonies so as to meet the communication over India, at Singapore, by the time the line is completed to that place? Yes, just so; but there must be some concert between the Company and between the Indian Government and this Colony, if we should commence before their line is completed to Singapore. The Dutch Government having possession of Java, and Batavia being a very considerable town, they would, no doubt, assist in carrying on the line from Singapore to Batavia.
13. What is the route you propose? The route I propose is a direct overland line from Port Essington. The Company propose a sub-marine line by way of Borneo and Celebes to Port Essington, and thence across the Gulf of Carpentaria and the York Peninsula and down our east coast to Sydney; but I am of opinion that a sub-marine line when you can have an overland one would be very objectionable. Any accident happening to a sub-marine telegraph cable could not be easily repaired, and would probably stop the communication for months, which would be very mischievous and embarrassing when constant communication had once been established.

14. *By Mr. Macarthur*: Would it be practicable to maintain a line of Telegraphic communication over a large extent of unoccupied country—Is it not in the first place necessary that the country should be settled, or large portions of it, at all events? That of course is a matter for consideration; but I think an overland route is far preferable to the submarine route which the Company propose. In fact they have already, I believe, abandoned the idea of an extensive sub-marine arrangement in Asia. They had some notion of carrying the line from Suez down the Red Sea to Aden, and along the shores of Arabia and Persia to Bombay; but now they think of continuing the line from Constantinople through Asia Minor, and down the valley of the Euphrates, and so to Kurrachee, where it would meet the Indian line. J. Thompson,  
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15. Looking at the settlement of the country between Moreton Bay and Sydney within a very recent period, do you not think there is a strong probability that the country to the northward between this and Cape York, or the Gulf of Carpentaria, or even Port Essington, may, within a moderate period, also be settled? There can be very little doubt about that, and the establishment of the Electric Telegraph would go far towards the opening of the country to such settlement.
16. As far as we know anything of the country between our farthest northern settlements at present and Cape York, we have reason to believe that it is, generally speaking, well adapted to grazing purposes? Yes.
17. That there is a great extent of grazing country? Yes, there is a great extent of fine country.
18. With a salubrious and comparatively temperate climate? Yes, considering the latitude.
19. A great deal of it is on a table land of considerable elevation? Yes; but that tract of country would be far removed from the line of Telegraph to Port Essington.
20. *By the Chairman*: I do not think you have yet indicated the particular points that you would connect in a line of communication by Singapore? It would be by the East Indian islands.
21. Will you indicate the particular localities, if you have so far matured your views? From Singapore the line will cross to Sumatra, by a small extent of sub-marine wire; following Sumatra it would then cross to Java—
22. Have you ascertained the distances? No, not exactly.
23. Where would you propose that the line should cross to Java from Sumatra? They are so very near each other, not above twenty miles or so apart, that I scarcely thought it worth while to consider that point.
24. There is no particular point of the Straits of Sunda where you would cross? No; I did not look to that at all. The line would then go to Batavia, and follow the line of the islands, the principal ones being Balli, Lomboek, Lumbarra, Flores, and Timor.
25. That would involve several sub-marine connections? Yes, of course.
26. What is the distance from Timor to Port Essington? About three hundred miles. I beg to hand in a copy of my pamphlet on this subject, which will be found to contain more of the details. (*The witness handed in the same. Vide Appendix A.*)
27. Have you made any calculation from any data as to the sum that would be required to construct this line to Port Essington? I have; but I would state to the Committee, previous to mentioning the calculations, that I was led to do so by looking at the expense of our present mail steamer communication; the amount being so large it appeared to me we could have the Electric Telegraph established from here to Port Essington for a similar annual outlay. Of course the estimates I have made are but rough, and may be very erroneous.
28. *By Mr. Irving*: Do you consider that line preferable to one from South Australia to India? You could not very well carry an Electric Telegraph from South Australia to India.
29. The distance would be too great for a sub-marine line? Yes. The great advantage of the line by Port Essington would be, that with the exception of a few small bits of sub-marine telegraph, to connect the East India islands, there is dry land all the way from London to Sydney and Melbourne, excepting the Straits of Dover and the Bosphorus. I beg to hand in a rough estimate which I have made of the cost of constructing this line from Sydney to Port Essington. (*The witness handed in the same. Vide Appendix B.*) The total annual cost, you will perceive, is £55,000; and if that sum were divided between the four colonies, it would be something more than £13,000 each; but of course it would require to be proportioned according to the population and circumstances of each Colony. At the present moment we are paying £22,000 a year for the steam mail communication, and Victoria pays £73,000, the whole cost, including what is paid by the British Government, being £190,000 per annum.
30. *By the Chairman*: Do you not take it for granted that the Electric Telegraph would supersede the necessity of communication by means of steamers? It would not altogether; but I think, as far as postal communication goes, it would almost do away with the necessity for a subsidy.
31. It appears to me to be an unfair calculation, to set the cost of the Electric Telegraph against the cost of the steamers; because the Telegraph, however beneficial in itself, would in no material degree lessen the usefulness of the mail steamers; we should require them just the same? I should be rather disposed to question that.
32. Do I understand that you are of opinion that communication by fast vessels would not be particularly necessary, if we had electric communication? Yes; I am of opinion that, as far as mere postal communication is concerned, we should not then be compelled to seek to secure such great speed by heavy subsidy.
33. Do you think the imperfect messages conveyed by the electric wire would answer all the purposes of the numerous letters we receive and send by the present postal communication, so as to throw us, for our ordinary correspondence, on the sailing ships? I look to see the means of communication by the Electric Telegraph advance as rapidly as steam printing has done, so that all matters of any moment will be easily communicated. I consider that until

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very long lines are established—such, for instance, as this between the Antipodes—the full power of the Electric Telegraph will not be brought to light; its importance will be found to increase with the distance. But to return to your question;—you would have steamers, no doubt, but there would be no necessity to pay for them.

34. There would be no necessity to subsidise them? Just so.

35. If a subsidy is necessary now to the existence of a line of steam communication, should we have it at all if that subsidy were withdrawn? Yes, you would have steamers of a certain class; they might not, perhaps, be quite so swift or so regular as they would be if subsidised; but it is scarcely possible to say. There is a growing impression in England, that the plan of subsidising companies for maintaining postal communication must give way to open competition.

36. My object is to ascertain from you whether, on reflection, you are not of opinion that the question of communication by Electric Telegraph should be considered by itself, independently of all other means of communication? Yes, certainly it should. I merely put this estimate forward to show that the cost of the Electric Telegraph would not be so great, considering the advantage it would be; that, indeed, it might be less than we are paying for steam communication; the main object of which, I take it, is the rapid communication of bare facts: now this can be done more rapidly by the electric wire, and just as well.

37. Have you made any calculation at all as to whether the traffic along this line, if established, would be sufficient to pay its current expenses? I had no means of doing that, nor have I so far entered into the question; though I did contemplate communicating with Major Christie, the Postmaster General, and seeing what the postal revenue, including India, was likely to be. I have no doubt that if the Company were to complete their line all through from England to Australia, it would be the best paying Company in the world; I should think the profits would be enormous.

38. Then if you could decide the matter, you would have the Australian Colonies commence at once the construction of a line of Electric Telegraph to Singapore? No, not just yet; but I think the matter should be considered seriously.

39. Have you ever fixed any date in the future when you think it should be commenced or completed? I think in the course of the next three or four years, or say five years, the Electric Telegraph will be continued as far as Singapore.

40. That is from Europe? Yes. At present it is completed throughout India; and the line from London to Constantinople is completed; and a celebrated Engineer (Mr. Stephenson) has, I believe, gone to Syria, for the purpose of seeing about the construction of a line of railway from Constantinople, through Asia Minor, and down the valley of the Euphrates, which would no doubt be preceded by the Electric Telegraph. What I thought was, that the Committee, in entering on the subject of connecting the Colonies by Electric Telegraph, should not altogether lose sight of the probability, that in a few years the question of its extension to Europe must be entertained.

41. It hardly appears that anything could be done immediately on the subject? No, excepting the line was continued to Brisbane; then the eventual extension to Port Essington might be cared for.

42. *By Mr. Macarthur:* You would not recommend that it should be commenced before the line to Albury? Oh no; I merely intended that the matter should be under consideration by the Committee. We must await the completion of the Indian lines as far as Singapore, and also see what the Telegraph Company is likely to do.

43. *By the Chairman:* If any additional information that might be of value to the Committee should occur to you, perhaps you will be good enough to add it to your evidence? Availing myself of this permission, I beg to add, that it would perhaps be advisable for the Government to communicate at once with the Mediterranean Electric Telegraph Company, and invite them to say what their views are as to the connection with Australia; to offer them a subsidy, or a per-centage on outlay, or any other assistance. I think too that we should communicate with the authorities in India, as to the probability of their extending their lines to Rangoon and Singapore. The Government of the Netherlands might also be consulted, as to the extension from Singapore to the town of Batavia, and through Java to any of the other Islands in their possession. Further, I may remark, that it would appear, from a conversation that took place in the House of Commons, on the 22nd May last, (when Lord Stanley asked if the Indian Government were taking any steps to facilitate the establishment of the Electric Telegraph between England and India, and he was replied to in the affirmative, and that the Indian Government were taking the most lively interest in the several schemes), that we may look to see the line between London and Calcutta very soon in action.

## APPENDIX A.

*Electric Telegraphs and Railways between Sydney and London not impossible.*

NOTE:—The suggestions thrown out in the following papers appear to have been lost sight of; at least, neither the press or the public have taken any interest in the matter, whilst the great American scheme, the Pacific Railroad, and which is not at all so feasible, nor yet, perhaps, so easy of accomplishment, or so likely to be generally beneficial, is constantly before the public in some shape. In the hope, therefore, that a project in which not only Australia but the whole of the Eastern world is so greatly interested, may be brought more prominently under notice, these papers have been hurriedly, and without revision, put together. The Fourth Paper brings the subject up to the present day, and those which precede it must be regarded as suggestive merely, for indeed the prospect of even the partial accomplishment of so vast a project is very remote.

## PART I.

## PRACTICAL.

The contemplated establishment (see late English journals) of an overland route from London to Bombay—or at least to the head of the Persian Gulf,—by way of Vienna and Constantinople,—thence through Asia Minor, and Syria, and down the valley of the Euphrates, is a project of vast moment to the Australian Colonies;—it is nothing less than the commencement of arrangements, which may eventually connect the cities of London and Sydney, by means of the Electric Telegraph, and even by railway.

If one of the minor Presidencies of India, viz., Bombay, is to be connected, as far as possible, by an overland route, with England, how far more probable is it, that Lahore, when it shall have become the capital of the British Empire in the East, will also be reached by a direct overland route rather than by the extraordinary round by sea and land, the present course.

But an overland route to India is not all that is talked of in the London journals. Of the extension of the Electric Telegraph to India it is said that “there is nothing in the proposal that does not appear feasible; nor would it be necessary to wait for the Great Oriental Railway;” so that the connection of Great Britain with India, by no less than three distinct means, is now in contemplation in England, viz.:—by overland route without railway—by railway—and by Electric Telegraph.

Already it has been determined to connect together, by means of the Telegraph, all the principal cities of India, viz.:—Bombay, Agra, Delhi, Lahore, Calcutta, and Rangoon; the lines for these connections have absolutely been decided on, and the expense estimated at £150,000.

As the Electric Telegraph has been already extended from London to Vienna, there can be little doubt that it will soon reach Constantinople, and that it would then follow the contemplated overland route to Bombay, or that to Lahore, where it would meet, perhaps, a line already established through Delhi and Agra to Calcutta.

If then, a line of Electric Telegraphs could be successfully established between London and Calcutta, that would show the possibility of a still further extension to Rangoon and so through the Birman Empire and Malacca to Singapore, so as to quicken the intercourse between England and the Colonies in the Eastern Archipelago, as well as with China and Australia. Thus far—that is between London and Singapore—these air drawn Telegraphs would be confined to dry land, with the exception of the Straits of Dover and the Bosphorus.

When it is considered, that the project for the establishment of an Electric Telegraph between London and New York, is seriously thought of, although the sea distance is 1,600 miles, and the expense estimated at three millions of dollars; the connection of Singapore with the coast of the Australian continent at Port Essington, by a series of sub-marine Telegraphs, between the line of islands, viz., Sumatra, Java, Lombok, Lumbarra, Flores, and Timor, would be comparatively an easy work,\* and from Port Essington the electric wires would easily find their way to Sydney, through the north-western interior, and thus the great desideratum of a rapid communication between England and Australia would be accomplished.

The most important of all considerations connected with the subject of Australian progress, is this, of speedy intercourse with the old world. But a matter of far greater moment, is the consideration of the possibility of railway communication, to a greater or lesser extent, between the Australian Colonies and Great Britain. Already a railway is in action between Bombay and Calcutta—and a railway from Calcutta to Lahore has been commenced at Calcutta. Should it ever reach Lahore, who can doubt that it might be extended, to Europe on the one side, and to Singapore on the other; whence steam to Port Essington would reach a railway from that place across the Australian continent to Sydney and Melbourne; and the intercourse between the Antipodean Cities would be accomplished with magic celerity.

The gigantic American project, for the continuation of the Railway between New York and the Mississippi to California, is a matter seriously thought of. If, therefore, such an undertaking as that is feasible, and if it would be advantageous to America, even in the present state of California, how far more desirable would it be to Great Britain, to connect her imperial capital—London—with the capital of her Eastern empire—Lahore—and finally with the capital of the Australian empire—Sydney. What the Rocky Mountains are to the American project, the mountainous country of Kabul (if the line by Lahore be followed) may prove to the schemes hereby contemplated; but the physical difficulties would

\*When cased in Gutta Percha, the bottom of the sea is found to be the best resting place for the electric wires; and so too in traversing desert districts, the wires can be buried a few feet below the surface.

would be of far less consequence, it is feared, than the moral difficulties. British capital, and British science and skill, might overcome the physical obstacles, but the moral obstacles may be found far more unmanageable. The maintenance of the stations which either the Electric Telegraph or the Railway would require, amongst the wild tribes and people of Asia, throughout the whole of the route intervening between Constantinople and Singapore, with the exception, perhaps, of the Hindoos, presents great difficulties; and these suggestions therefore are not thrown out without some misgivings. Still, the commencement of Electric Telegraphs and Railways in India, and the network of Railways promised by Mr. Rothschild in Syria, do afford some promise for the completion of these mighty projects for "annihilating time and space," and which would contribute more to the advancement of intelligence, and the civilization of the whole world, than anything which has hitherto been contemplated. Whilst all the doings of Asia were brought under the review of the European public—the people of Europe would be distributed all over the East, carrying with them the ameliorating influence of their advancement. England can never recede from the position which she has taken in the East, and whether she be called upon to suppress piracy in the Indian Archipelago—to correct Chinese impertinence—or to protect her Australian Colonies, the railway offers facilities far more valuable than a thousand steamers. Supposing even that the jealousy of the European States should prevent Great Britain from travelling *by rail*, or *talking by wire*, through Europe, it would be well worth her while to attempt, by a treaty with Turkey, the subjection of the petty eastern nations which are in the way, and after steaming to Constantinople or Beyrout, take on the rail to Singapore; for besides the political advantages that would result to Great Britain from a railway through Asia, her manufactures of every sort, from velvet to lucifer matches, would be spread over that continent to an extent which would greatly advance her prosperity, and assist in feeding her people at home.

The bare possibility of travelling from Sydney to London by rail, and viewing all the great cities of Asia and Europe; viz.:—Singapore, Calcutta, Benares, Agra, Delhi, Lahore, Cabul, Ispahan, Bagdad, Antioch, Aleppo, Constantinople, Belgrade, Pesth, Vienna, and finally Paris, is more like a dream than a project likely to be realised; but if the geography of the old world be studied, the feasibilities of all that is now suggested become evident, and it will be found that the establishment of railways between London and Sydney is not impossible, any more than that the electric wire should, in the course of a few days, reveal to Sydney all the news of Europe and Asia. Already New York and Cincinnati are connected, over boundless forests, wide, deep, and numerous rivers, and lofty mountains. New York and New Orleans are also connected, and it can never be but that all the great cities of the old world will shortly be connected by the magic Telegraph like those of the New, and then the extension to Sydney must follow.

## PART II. FINANCIAL.

In part the first the practicability of establishing an Electric Telegraph, and even a Railway, between Sydney and London was demonstrated from many pregnant circumstances—principally that electric telegraphs and railways are already in progress in India—that Baron Rothschild contemplates a network of railways in Syria—that a grand Oriental railway and Telegraph between London and Calcutta are spoken of, besides overland routes to India—and that, in time, the extension of the Telegraph and rail to Singapore, and to the Australian Colonies, can scarcely be doubted. The ways and means by which this project could be accomplished have now to be considered.

The finance of a scheme which is to connect the antipodes can scarcely be brought within rule, nor are there any readily accessible data here on which to found calculations; and even if there were, statements of outlay and profit, save of the rudest character, would be quite out of the question; besides, there are so many contingencies arising from the circumstance of the lines passing through different countries with different interests, that all that can be done is to shadow forth the probable means of bringing about the arrangements in question.

The Continental Powers will, no doubt, continue the line of rail (which already extends as far as Vienna) to Constantinople—Baron Rothschild will continue the line from Constantinople through Syria, to Alexandria—then the British Government, or a Grand Oriental Railway Company, would continue the line to Lahore—the lines through India are in the hands of the East India Company, and they, with some aid perhaps from the Government, would continue the line to Singapore—through the Indian Archipelago, where some screw steaming would be required, the interests of Great Britain would lead perhaps to the offer of facilities to some English company, or it might be combined with the portion of the line which passes through and pertains particularly to Australia—but the portion of the work strictly Australian, viz., from Port Essington to Sydney and Melbourne, as it would have the least traffic of any part of the line, and consequently be the least profitable, calls for extraordinary means to effect it. Still, the raising of a sufficient capital, immense as it must needs be, does not appear altogether impossible; let but the real practicability of the project be ascertained, and its utility become generally evident; let but the prospective intercourse with Great Britain be made as sure, and easy of accomplishment, as if it were possible, by the aid of an Aladdin's lamp, to transport the continent of Australia from the Pacific to the Atlantic, and every bit of Australia's waste lands—some thousand millions of acres—would be worth, not £1 per acre (the present monopoly price) but £10 or £20, or more. Were the British Government, therefore—instead of giving it away in bits as it may be demanded by the Legislatures of the different Colonies—to devote these waste lands of the Australian continent to meet the outlay required for the Australian portion of the line, any amount of capital, under a system of remission, could, in all probability, be procured. Suppose that a company were proposed upon the principle that for every pound sterling of capital invested therein there should issue a remission ticket, receivable by the Colonial Treasurers of any of  
the

the Australian Colonies as payment for waste lands submitted for sale by auction under the existing Acts of Parliament, then, although doubts might be thrown over the possibility of obtaining a return for such an immense expenditure as the Telegraph and Railway would require, yet, as the subscribers would, at the least, receive some equivalent for their money, in the shape of waste land, there would be no hesitation on the part of English capitalists to invest in the stock of such a company—it would be purchasing waste land to be rendered valuable by the very means to which the investment would be applied, over and above the chances of obtaining eventually a money interest from the Railway and Telegraph. And so long as the auction system was maintained, no confusion or difficulty could, by any possibility arise. The nearer the Railway connecting the antipodes grew to completion the more valuable the lands purchased by the remissions would become. It just amounts to this—Is the continent of Australia worth anything? If it is, why give it away? Why not apply it to the making of a portion of this grand Antipodean Highway.

Having thus reviewed the ways and means of carrying it out by piecemeal, it is worthy of consideration whether the line in its whole extent should not be regarded rather as a great national work, to be undertaken by the Nation itself, or by a National Company, such as that by which India is still in some measure ruled. In order to arrive at some notion of what would be required of such a Company in the way of expenditure, some rude calculations have been made. Supposing that Vienna, to which railways already extend, were taken as the starting point, the distance to Sydney would be about twelve thousand miles—then, considering that the outlay for land (so large an item in the English Railway expense) would be but trifling in Asia, £10,000 per mile would perhaps be an ample estimate (the Madras line is estimated at £5,000 only), the total expense, therefore, would, at that rate, be 120 millions of pounds sterling, just half the expenditure already incurred for railways in Great Britain, viz., 240 millions. Now the expenditure of even the half of such a sum upon this contemplated antipodean Railway would do more, perhaps, for Great Britain than the expenditure of the whole 240 millions within her own bounds has effected for her. In the other point of view, viz., piecemeal, the expense would be greatly reduced; for, supposing that railways were in progress by foreign powers to reach as far as Syria, or that we had to start from Beyrout to avoid the jealousy of the European Nations, the distance from Beyrout or any other point in Syria to Lahore or Bombay would be about 2,000 miles; then, leaving the Indian line to the Company, we come to Calcutta, from whence to Singapore is another 2,000 miles, whilst the distance from Port Essington to Sydney may be taken as another 2,000 miles—making in all 6,000 miles, which, at £10,000 per mile (perhaps this latter could be done for £5,000), would be 60 millions, one quarter only of what has already been spent in England. To arrive at any conclusions as to the expense of the Electric Telegraph is not very possible, but looking roughly at the estimated cost—£150,000—of the network of Telegraphs which is to overrun India, it might, perhaps, take a million of money.

Some new and glorious speculation is required to employ the teeming capital of England. It could not be more safely invested than in land. Great Britain possesses immense, unlimited tracts of waste land, only worthless because not readily accessible. Railways would make them accessible and valuable, and consequently saleable; and the Government, as trustee for the Nation, would be fully justified in devoting the national waste lands to the bringing about of a result which would be strictly National, and productive of the greatest National benefit. The waste lands—the real, the only true source of wealth\*—have been *thrown away*, have been given to companies with a view to foster emigration and commerce; but if, instead of to such companies, the waste lands were given to railway companies, or, in any other way applied to railways, the purposes of emigration would be far more effectually served, and the commerce of the country would be much more extended.

The greater part of the line has been, for hundreds of years, the principal course of traffic between Europe and Asia, the source of immense profit to the commercial world, and its extension to Australia would open out new channels equally profitable and beneficial. Extending so centrally, east and west, through the very heart of Europe, Asia, and Australia, the line would draw to it, from the north and south, all the commerce, all the emigration and travelling, and all the postal business of the Old World.

### PART III.

#### POLITICAL AND SOCIAL.

Of the former papers on this subject, the first touches upon the *probabilities and possibilities*; whilst the second has reference to the *ways and means*;—the *social and political* considerations have now to be dealt with.

The occupation of waste lands by the impoverished but industriously disposed inhabitants of old countries, must follow upon the introduction of facilities for deportation. Emigration, therefore, would be one of the great objects of the railway, and one of the chief sources of profit, and, even supposing that emigration from Great Britain should, by the time that the railway was in action, have declined, in consequence of an increase in the means of employment of her pauper poor, (notwithstanding the addition of a thousand a day to her population,) still a railway would offer irresistible temptations to the oppressed and starving populations of Europe and Asia; millions of people would be poured into Australia—a mighty revolution would be effected—Australia would become another America.

But, besides the emigration, the mere amount of travelling that would be created by a means of communication—so rapid, so safe, would be immense:—every wealthy inhabitant

of

\* Gold is but the representative of Wealth.



of Europe and of America would visit Asia and Australia, and *vice versa*: artists, lecturers, actors, authors, missionaries, the enterprising of all trades and professions would be on the move, either to collect materials for their works, or to submit them to new communities; the Mahomedan and Pagan religions of the East would be eventually swept away; darkness and ignorance would vanish before the enlightenment and literature of Europe. But it is vain to dwell upon what would result from the realization of such a project; the wildest dreams, would not, comparatively, equal the astounding comminglings of nations and peoples that would be brought about; a great social revolution would be effected; the inhabitants of the old world, from London to Peking, would be all mingled together, and eventually, perhaps, converted to one religion.

One of the first additions to the civilization of the East (already in progress in India) would be, besides the construction of the rail, the presence of troops and Europeans at the stations; for through many parts of Asia the lines would, perhaps, require the protection of soldiers, the only objection to which would be the expense; but it is a question, worthy of reflection, whether it would not be, that the greater the outlay in which Great Britain was involved, the greater would be her prosperity. Her superabundant capital would bear to be reduced by taxation; it is a fallacy to suppose, that in England taxation affects the poor; it is only in communities where rich and poor are properly balanced, that taxation presses upon production. The more of her poor that Great Britain can continue to support artificially the better; by artificially, is meant, as soldiers, sailors, and police, or as artisans and workmen.

Although the social advantages which would result from the construction and final establishment of this means of intercommunication, would be great indeed; the political advantages and considerations are of no less importance, at least, as far as Australia is concerned; for, by the aid of Railways and Electric Telegraphs, Great Britain and her Colonies and dependencies, may be cemented into one nation. No longer would arise the necessity for separate legislatures—no longer would there be the striving to reconcile the anomaly of Responsible Government with Imperial control. But Australia, divided into small provinces, could send her members to Parliament, and, by the aid of the Telegraph, the minutest circumstances and details, and expressions of public opinion, could be passed backwards and forwards. The reports of parliamentary doings in London could be published in Sydney in less time than it took, thirty years ago, for them to reach Liverpool or Bristol. The speed, however, with which intelligence could be conveyed between Sydney and London by the Telegraph, must remain, until tried, a matter of surmise merely, because there might be interruptions to one continuous shock, which it is impossible to foresee; but, without such hindrance, a second, or a fraction of a second, would suffice to convey signs between the Antipodes. The journey of a Member of Parliament from Sydney to London, would be less hazardous, and occupy less time, than a journey from Edinburgh in former times; indeed, by the aid of the rail, Sydney would be brought as near to London as Canada now is. At the rate of 50 miles an hour, the (13,000) thirteen thousand miles would take 10 days; but allowing for the bits of steaming, and the necessity, perhaps, of rest for the travellers—the journey might take some 20 days, more or less; a period sufficiently brief to warrant the belief that the Australian Colonies may become, according to the views of the late Sir Robert Peel, as much a part and parcel of the British Empire as if they were so many additional counties merely. For suppose that it were possible to add to the superficies of England;—suppose there were some great upheaving of land above the level of the ocean,—then, although the social fabric would have to be created, there would be no thought of giving to this new land a separate Legislature and Responsible Government.

The philanthropy and nationality of the whole of the British people may well be enlisted in such a cause as this, which would not only cement them in one grand political union, distribute manufactures and raw material, and the supplies of food, but would equalize and spread over the available waste lands of the Pacific, the too crowded population of the Old World, benefiting, to an almost unimaginable extent, those pent-up sections of the human family, who only require the means to enable them to escape from the most intense wretchedness.

However utopian these suggestions for telegraph and railway may appear to some readers, it will be found, on consideration, that, in comparison with bygone suggestions now realized, this is nothing more than a daring proposition, which, sooner or later, will become a fact;—just as a railway between London and Peking will become a fact, and a hundred other railway intercommunications not now dreamed of.

It has oftentimes, in the present day, been suggested, that the spread of the Anglo-Saxon race over the whole world is one of the means devised by the great Spirit of the Universe, to bring about that progressive amelioration to which mankind is evidently subjected, and without which man's endowment of reason would be useless. This scheme, therefore, for a highway of the greatest possible extent, which the position of the dry land of the earth will admit of, may be considered an important step towards the accomplishment of one of the supposed decrees of the Creator—"And the sixth angel poured out his vial on the great river Euphrates, and the water thereof was dried up, *that the way of the Kings of the East might be prepared.*" Unless these provinces become the United States of Australia, there are few in this Colony who may not live to see Queen Victoria a visitor to the Governor General of all the Australias; few who may not see the British Association holding its sittings in Sydney; whilst Jenny Linds, and other prodigies, would be as familiar to the Sydneyites as to the Londoners.

Sydney, Oct. 23, 1852.

## PART IV.

PRESENT STATE, 1854.

The laying down of the sub-marine Telegraph from Spezzia to the Island of Corsica—an event of wide world importance—has just been most satisfactorily accomplished.—*Letter from Cape Corso, July 25th.*

We are glad to observe that the Electric Telegraph betwixt Bombay and Calcutta is at present in good working order.—*Bengal Huskaru, August 26th.*

The Electric Telegraph between Agra and Calcutta, 800 miles in length, is completed.

Almost before we have learned to regard the idea of a magnetic intercourse betwixt England and India, as anything better than chimerical, there seems something like a probability of its being actually realized.—*Agra Messenger, August 26th.*

It is impossible to read the above quotations without coming to the conclusion that the time is not far distant, when, by the aid of the Electric Telegraph, a few days may serve for communication between Sydney and the great cities of Europe. When, some two years ago, the views on this subject were laid before the public, and it was shewn that the establishment of a Telegraphic intercourse between Sydney and London was not only feasible but probable, that it might be looked upon as a thing to be, there was little prospect that such rapid advances would have been made in so short a time towards its accomplishment. Now, however, that the line between France and Africa has been partly laid down, its extension to Alexandria cannot be doubted, and then, as the line between Bombay and Calcutta is already in action, it is unlikely that any obstacles whatever will be permitted to interfere with the ultimate completion of the connection between Bombay and Alexandria. Already three eligible lines have been proposed by a Mr. Adley for connecting Bombay and Alexandria, and the expense of each calculated, so that the Telegraphic intercourse between London and Calcutta is a matter which all the English newspapers look upon as almost accomplished. Can it be doubted, then, that Singapore, which is becoming one of the most important cities of the world, will be left out of the magic line, when the means which it would afford of rapid communication with China and the Pacific Islands is considered, and, as a matter of still greater importance, the means of communication with the great and growing Australian Colonies? Whenever the Telegraph reaches Singapore, its extension to Sydney must follow. The chain of islands from Sumatra to Timor offer sufficient facilities; the sub-marine arrangements required to connect the different islands present very short distances—the greatest will be between Timor and Port Essington; indeed this will be the longest sub-marine bit in the whole line. From Port Essington through the western interior of Australia, the wires could be buried, and so require but little attention.

It is a mistake to suppose that the Electric Telegraph is suited to short distances only,—quite a mistake; the importance and utility of the Electric Telegraph must evidently increase with the distance, and ere long the transmission of letters by post between the antipodes must cease; no one will care to be writing a letter which it will require five or six months to get an answer to, when it could be obtained in a few days or hours; the transmission of cart-loads of newspapers backwards and forwards would cease, and the contents of the *Times* would be made known in Sydney in two or three days, instead of two or three months; so that eventually, perhaps, the Australian Post Office departments may be entirely set aside to make way for Electric Telegraph departments.

That the merchants of Sydney, Singapore, and London, should be any longer content with the present bungling, round-about mode of communication, is really astounding,—if there were any insurmountable obstacle to telegraphic communication, then the present system might be tolerated; but as the establishment of a line of Electric Telegraphs is merely a matter of expense, and the existing expense of Mail Steamers is enormous,—far greater, perhaps, than the Telegraph would be,—so there appears to be no great obstacle but the want of energy to the carrying out of this glorious project, which is again brought under notice, because it is always desirable to keep in view all great prospective benefits, so that we may avail ourselves of every turn and advantage towards the accomplishment of that, which, although inevitable, may be more or less advanced in proportion to the enthusiasm with which it may be received, and the agitation which is brought to bear upon it.

## APPENDIX B.

CONSTRUCTION (COST OF).		£
Survey from Sydney to Port Essington, 1,800 miles, at £5 per mile ...		10,000
Telegraph Wires, 1,800 miles, at £50 per mile ... ..		90,000
Stations at every 30 miles, 60 at £500 each ... ..		30,000
Total ... ..		£130,000
ANNUAL COST.		£
Interest on original outlay of £130,000, at 5 per cent... ..		6,500
Conductors at each Station, 60, at £500 per annum ... ..		12,000
Men (at each Station 5), 300, at £50 each per annum ... ..		15,000
Rations for 6 men at each Station, 360, at £40 each ... ..		14,400
Horses (2 at each Station) 120, at £50 each ... ..		6,000
Contingencies ... ..		1,100
Total ... ..		£55,000

THURSDAY, 18 DECEMBER, 1856.

Present:—

MR. COWPER,  
MR. IRVING,MR. MACARTHUR,  
MR. PARKES.

HENRY PARKES, ESQ., IN THE CHAIR.

W. G. Sprigg,  
Esq.

18 Dec., 1856.

William G. Sprigg, Esq., called in and examined:—

1. *By the Chairman*: How long have you been in the Colony? Nearly two years.
2. You came out to the Colony as Agent for a Telegraph Company? As Agent for the Magnetic Telegraph Company.
3. Did you come out authorized to contract for the construction of Telegraphs in these Colonies? Not to contract on account of the Company, but to supply their instruments and materials to any persons willing to contract.
4. Have you taken any steps towards carrying out the intention for which you came to this Colony? I called, shortly after my arrival, on His Excellency, and shewed him the instruments I had brought out with me; was directed by him to take the opinions of the merchants upon them, and I accordingly introduced them at the Chamber of Commerce. The merchants said they were not in a position to entertain the subject, but privately stated that they thought the Commissioners of Railways would be the parties most likely to take the matter up, and I then applied to them.
5. Without success in all cases? Without success in all cases.
6. Have you ever been to Melbourne since you arrived in the Colony? I have been three times.
7. Did you go to Melbourne on business connected with the Telegraph Company? One of my visits was principally connected with that.
8. Were you in communication with the Superintendent of the Telegraph in that Colony, when you were there? Yes, repeatedly.
9. You did not transact any business with him in connexion with the Company for which you are agent? I did not.
10. Will you have the kindness to inform this Committee, which has been appointed to consider the subject generally, whether you have any instruments with you in the Colony; what is the character of those instruments,—also the character of the instruments used in Victoria;—and what constitutes the difference, if any, between your instruments and those used in Victoria? In reply to your first question, I beg to hand in a descriptive Circular of the instruments I have with me. (*The Witness handed in the same—(vide Appendix)—and produced an instrument.*) They are magnetic, and are found, by the companies at home, to be more economical and more certain than any other kind of instrument invented.
11. Will you state the difference between this instrument and the instrument generally used in Victoria? The instrument used in Victoria is that invented by Professor Morse, on the recording principle, which is used in connexion with the galvanic battery. The main difference between that and the instrument I have here is, that we get power entirely from magnets, instead of being obliged to depend upon batteries, which require continued attention. These instruments I had magnetized before leaving England, and I think I can warrant them to be ready for immediate use for the next twenty years. The current is produced simply by changing the poles of the magnet—a principle discovered by Professor Faraday. The test of time given in England proves that the magnetic instrument, working with the two needles, will transmit, in the ordinary way, about twenty words per minute more than Professor Morse's. The distance that they will carry, without further power, is of very great advantage, inasmuch as they are always ready to transmit messages to the most distant stations. The instruments used with the battery generally require a great addition of power in heavy weather. At such periods they are not unfrequently obliged to use twenty twenty-four cell batteries to convey a message from London to Glasgow. In order to propel a message so far, these instruments, without any addition, will convey their current 500 miles. If a longer distance be necessary, magnets might be increased in power, so as to carry an almost indefinite distance.
12. What number of cells are there in the batteries used at Melbourne? I believe they are twenty-four cell batteries.
13. Can the instruments be properly distinguished by calling one the magnetic, and the other the voltaic, instrument? Voltaic instruments are of many kinds; that used at Melbourne is Professor Morse's; then there are the kinds invented by Professor Wheatstone, the Messrs. Highton, and many others.
14. But the class of instruments, irrespective of the improvements? They would be so distinguished.
15. Can you state, from knowledge you have acquired since you have been in the Colony, what led to the adoption of Morse's recording instrument in Victoria? Mr. McGowan had used it in America, and he being the only person who brought forward the Telegraph with any energy in the Sister Colony, succeeded in introducing it, and established that instrument which he was most accustomed to.
16. You consider it decidedly inferior to the instrument we have before us now? I do.
17. This is Henley's Patent? It is Henley's Patent. I may farther state, that Mr. Charles Todd, of Adelaide, who was for a long period in England on account of the South Australian Government, having examined every kind of instrument produced in England, selected this as the best, and brought an instrument of this kind to Adelaide with him.
18. The Magnetic Telegraph established at Adelaide is the same as this? I believe that owned by the Government is the same. For the proposed line between Adelaide and Melbourne I find, however, that in deference to Mr. McGowan, Mr. Todd is willing to adopt the Voltaic principle, and use Morse's instruments.

W. G. Sprigg,  
Esq.  
18 Dec., 1856.

- 19. My question was as to the Telegraph already established—that is Voltaic? There are in Adelaide two lines. That in the hands of the Government is, I believe, magnetic. That owned by Mr. McGeorge is, I think, Voltaic.
- 20. I think you said batteries of twenty-four cells would be required? Yes.
- 21. I see that in Mr. Todd's Report he states:—"On the line now in operation from Melbourne to Queenscliffe, seventy-one miles, a Grove's battery, consisting of fifteen cells, is placed at each end of the line, both, (except during the transmission of messages,) in constant action, so as to be available at all stations?" My impression was, that the batteries in use were the same as those most used in England. The principle is, however, the same.
- 22. Supposing a line of Telegraph to be constructed to unite the Cities of Melbourne and Sydney, I apprehend that on the Victoria side the instrument used will be Morse's recording instrument? Yes; I believe so.
- 23. Would there not be an obvious advantage in continuing it to Sydney by the same instrument, even supposing it to be inferior, for the very reason that it is already extended to Albury on that principle? If you were bound never to substitute the line first laid down, I think it would be an obvious disadvantage to have a line composed of two sorts; but from the experience in England of the Magnetic Company, I have little hesitation in saying, that in a few years all other systems will give way to the magnetic. They have done so in England, line after line.
- 24. In what parts of England have the Company with which you are connected lines of Telegraph? In reply, I would like to read to you their Circular, printed in 1853, since which time many other lines have been entered upon. (*Circular read as follows*):—"A Royal Charter of Incorporation has been granted to this Company, and they are at present laying their wires along the East Lancashire Line to the manufacturing towns of Lancashire and Yorkshire. The Caledonian Railway Company have adopted the Magnetic Telegraph, and contracts have been entered into with them by the above Company, and communication will then be made between the cities and towns of Edinburgh, Glasgow, Greenock, and the chief seats of industry in North Britain. The several lines from Dublin to Newtownards, taking in Drogheda, Dundalk, Newry, Portadown, Armagh, Lurgon, Lisburn and Belfast, are to have Telegraphs on this principle. The Submarine Telegraph by this Company, from Donaghadee to Portpatrick, connecting the Home Office, London, with the Castle, Dublin, will be laid down in six or seven weeks, the cable for which being now in the hands of Messrs. Newall of London; and the route towards London, Liverpool, Manchester, &c., will be shortly completed. In the tunnels on the Great Northern and Scottish Central Railways, and the line between Liverpool, Wigan, Bolton and Manchester, the Magnetic Telegraph has been in daily operation for several months past, and has afforded the highest satisfaction. On the Midland Great Western Railway of Ireland, from Dublin to Galway, this Telegraph, just completed, forms the first link in the chain between the West and the North of Ireland. Contracts have also been entered into between the Magnetic Telegraph Company and the Directors of the Ulster Railway, as well as with the County Down Railway Company; and various others of great importance are now under negotiation. The *Northern Whig*, alluding to the subject of the English and Irish Magnetic Telegraph, and to the operations of the Company, thus speaks of future proceedings:—"We have it on authority, that a very brief period will elapse ere Belfast be placed in direct communication with the three capitals of these kingdoms, as well as with the capitals of the continent. Measures to this effect are at present in progress, and will not, we are satisfied, meet with impediment or procrastination. The scheme of Telegraph actually agreed to by the Company takes in Dover, London, Birmingham, Wolverhampton, Manchester, Bolton, Wigan, Liverpool, Preston, Carlisle, Edinburgh, Glasgow and Greenock, in Great Britain; and Donaghadee, Belfast, Dublin, Galway, Limerick, Tipperary, Waterford, Cork, and the intermediate towns in Ireland. Lines of eight wires are in daily operation between Liverpool, Wigan, Bolton, and Manchester; a six-wire line is to extend from the latter city to London and Dover; from Liverpool to Carlisle the line (which is subterranean) consists of four wires; and from Portpatrick to Donaghadee the Company have already made the preliminary arrangements for submerging a series of six, insulated wires, prepared and made by the same eminent engineers by whom the Dover and Calais cable was fabricated. The two-wire line between Dublin and Galway has already given the most ample satisfaction to the Directors of that line of railway, and the same may be said of all the other lines which the Company have constructed in England and Scotland. We may state that the scheme above projected, the Company intend shall be carried out most fully, and, we will add, in a very short time hence. As a proof of this assertion, it may be added that the wires for the Irish inland lines are at present at the Ulster Railway Terminus; that the wires for the County of Down line are also at the County of Down Railway Company's Terminus; and that the cables for immersion across the Channel are at Gateshead, at the Messrs. Newall's works, undergoing the spiral laying of the iron wire which is to encase them. Inside the external iron wire casing is a coating of gutta percha, in which the wires were enclosed by Mr. Stathan, of the Gutta Percha Company, some time since. The process at the Messrs. Newall's must be nearly, if not already completed; and, on that being done, and the wires tested, it only remains to carry the rope to the harbour, and lay it across. That this final operation will be attended with no discomfiture that skill and ability can avert is sufficiently guaranteed by the success attending on the great achievement of the Dover and Calais Submarine Telegraph—an enduring monument of their ability in coping with and overcoming obstacles which, to other eyes, seem well nigh impossible."
- 25. Is the instrument at present used in Victoria used at all on the great lines in England? I believe not at all.

- W. G. Sprigg, Esq.  
18 Dec., 1856.
26. It was imported there from America? It was; but was repudiated by all the English companies. It was manufactured in England, but the principle was from America.
27. Have you considered—I presume you have, as you have a direct interest in it—the subject of constructing the line from here to Melbourne, and the probable cost? I have.
28. Have you read the paper now before you on that subject? I have.
29. *By Mr. Irving*: Have you been over the country? I have not.
30. Have you been as far as Goulburn? No.
31. *By the Chairman*: Did you notice the plan suggested there of carrying the lines, that is, by means of posts twenty-five feet high? I did.
32. What conclusion did you come to, after reading that estimate, as to the desirableness of carrying the line by means of posts, and also as to the probable cost? I judged that the posts will be the best method of carrying. The cost, I think, is understated; I do not think it can be done for the sum stated.
33. What should you estimate would be the cost per mile of carrying out the Telegraph, as there projected, to the township of Albury? I can scarcely say what the probable expense would be, but I think they have not estimated enough for carriage of posts.
34. *By Mr. Irving*: No doubt they calculated that there was so much timber along the line that the carriage would be a mere nothing? That would certainly lessen the expense. Mr. McGowan ought to be in a position to tell, within a little, what it would cost; but my impression, from all I can learn of the nature of the line, is, that he has not estimated enough for building. The metal part of the line, on the contrary, might be done rather under what he states.
35. *By the Chairman*: Are you aware that Mr. Todd has estimated the construction of the line from the western part of Victoria to Adelaide, an almost untraversed country, at a much lower figure? I am; but from all I can learn of the nature of that country it is much less intersected with trees.
36. *By Mr. Irving*: It is more pastoral land? More pastoral land.
37. *By the Chairman*: I may inform you, that gentlemen have been before the Committee who would enter into a contract to construct the line according to that estimate? I judge that portions might be taken, but I think the price is scarcely fair. I have it from Mr. McGowan, that for the Ballarat line tenders were sent in originally at, at least, three prices lower than that at which the work is now being done, which tenders were withdrawn by the parties when there appeared to be a chance of their being accepted.
38. At what period were you last in Melbourne? In August.
39. That would be about the time that Mr. Todd was there? I was there on mercantile business, and did not see Mr. McGowan. I had not time to direct my attention to the then progress of the Telegraph. In May I saw him last.
40. You are aware that the question is taken up very earnestly in Victoria? I am.
41. You have no doubt about the lines, now in course of projection, being ultimately carried out? None whatever.
42. Have you sufficient material in Sydney to carry the line to any considerable distance? I have not; but I am offered the material in which I am deficient from a house in Melbourne, sufficient to carry a hundred miles.
43. You could then construct a Telegraph a distance of a hundred miles? I could.
44. Not beyond that? Not without sending to England.
45. You are not prepared to give any data for calculating the cost of constructing a line to Albury? I am not; I have tried it several times, and am the more certain that it is utterly impossible to give an honest estimate without going over every mile of the ground, inasmuch as in the short distance you may leave unsurveyed you may meet with difficulties that may very materially affect your estimate.
46. Your opinion, however, is, that the present published estimate is too low? I judge it to be rather too low.
47. And you are of the deliberate opinion that within a few years the voltaic principle in Electric Telegraphs will have to give way to the magnetic principle, upon which these instruments are based? I am; but I think it quite possible that within a few years we may have an improvement upon this particular instrument.
48. I merely speak of the principle, irrespectively of improvements? I should expect to see the voltaic principle give way, and the magnetic generally prevail.
49. In England you say the Telegraphs worked by voltaic batteries are entirely out of use? No; they are gradually giving way. Morse's Telegraph is not used in England.
50. That is, the particular instrument in use in Victoria is not in use in England? Yes.
51. Did you notice in Mr. Todd's paper an allusion to an improvement on Morse's instrument, made by Mr. Siemens of Berlin? I did. I saw these instruments, which were shewn to me by Mr. McGowan, in Melbourne, and am quite of Mr. Todd's opinion, that they are too expensive for general use. I think, further, that they are too complicated for ordinary purposes.
52. You are aware that Mr. Todd gives a qualified recommendation in favour of these instruments for the Melbourne and Adelaide line? He does.
53. Practically the instrument sends messages that cross each other, that is to say, he transmits messages from both ends at the same time by the same wire? It is done thus:—Supposing the terminals to be North and South,—North receives an indication that a message is coming, and by that is enabled to see what strength the electrical current has, which is in that instance used by South; North accordingly adjusts his instrument to the same strength, and may then transmit messages from both ends at the same time, without interference. In the event, however, of the current being stronger at one end than the other, the weaker will be forced back.
54. You cannot advise the introduction of these instruments? I cannot.
55. You have had some experience now of the Colony, and have also commercial knowledge generally

generally; will you have the kindness to state your opinion as to what would be the effect upon Sydney provided no movement were made to bring this Colony within a system of Telegraphic communication likely to be carried out, and to embrace the other three Colonies? That it would lose status in a degree scarcely to be calculated. The most palpable consequence would be in this way—Melbourne market being bare of goods, the merchants would immediately supply their wants from that place whence they could insure receiving them most speedily; they would not write to Sydney and wait for a week to receive the goods, while they could Telegraph to Adelaide and receive them within three days.

W. G. Sprigg,  
Esq.  
18 Dec., 1856.

56. Was it not the case in England, that as soon as electric communication was established with one great seat of trade and manufacture, that other centres of commerce and manufacture had, as a means of self preservation, to adopt the same course? It was.

57. *By Mr. Macarthur*: Would a person conversant with the use of Morse's Telegraph have much difficulty in acquiring the requisite knowledge for working this instrument? It might be learned in a day; the only thing necessary is a little practice. You may learn the code, which is on the plate, in five minutes, and it is then necessary to acquire quickness of eye to detect the motions of the needles. An hour's practice would enable a man of tolerable ability to become proficient.

58. So that there would be no difficulty, on that score, in substituting one instrument for the other? None whatever.

59. Have you formed an estimate of what would be the cost of substituting the magnetic apparatus for Morse's to the extent of a hundred miles, supposing it were advisable in other respects? It would depend upon how many wires there were in that originally built. If Morse's had been constructed on the cheapest possible principle, and built with only one wire, it would be necessary to add a second; but if it were built on the usual plan of leaving a few reserve wires, no expense would be necessary beyond the cost of the instruments. The minimum number of wires for these instruments is two.

60. The same wires would be applicable to both? They would.

61. *By the Chairman*: The expense of changing the instruments would not be great? No; all that would be necessary would be to unscrew the terminals.

62. It would be very little beyond the cost of the instruments? It would be nothing. I have received from the Home Company a letter upon the subject. They are anxious to place this Colony in a position to take their instruments; and this has led them to give me a lower list than that I first brought out. I can now supply these instruments at £35 each; and I may state, in the way of explanation, that while that may seem a little higher than the sum ordinarily stated, there is a vast economy in not having the batteries to provide in addition. For instance, in the statistics given by Mr. Mann, as published in the *Government Gazette*, I find for the purchase or construction of two double needle Telegraphs, £30 each, but to that there is to be added four 24 cell batteries, £10 each; making, in point of fact, the cost of each instrument £50 instead of £30.

63. Will you have the kindness to state to the Committee whether, in the event of the line being constructed from Melbourne to Albury to be worked by Morse's recording instrument, there would be any great difficulty in the line from Sydney to Albury being constructed with Henley's patent magnetic instrument, and what would be the means necessary to connect the two lines of Telegraph? I am not aware that there would be any difficulty whatever. In the event of a message being sent from Sydney to Melbourne it would be transmitted to Albury by the magnetic instrument, and then taken down and forwarded by Morse's. This would only occupy the time necessary for the transmission of the message.

64. It would take twice the length of time? No; much less than that.

65. Would it not take twice the time, excepting the time of travelling; would it not take as long at Albury to repeat the message as it takes at Sydney to give it? It might, but I believe if the line were all constructed on the principle now adopted in Melbourne that there would be no economy, inasmuch as their battery would not carry the whole length; somewhere or other, they must have a break.

66. They could not carry the whole distance with one battery, or with the batteries at each end? I believe they have no battery that could carry a distance of five hundred miles—they must have a break somewhere. The same thing has been found at home; indeed, I have known instances where from London to Glasgow they have had four such interruptions.

67. Supposing we constructed a line from Sydney to Albury, one altogether independent of that carried by the Victorian Government from Melbourne to Albury, there would practically be no serious impediment? I believe not.

68. Certainly none as compared with the Telegraph constructed on the plan adopted in Victoria, because you say no battery would carry the whole distance without a break? No battery would carry the whole distance, and as these instruments carry a greater number of words in a minute, I consider that there would be an economy of time in Telegraphing the whole distance, by Telegraphing part with these instruments.

69. As we should not have to connect ourselves with any other Colony, whatever lines we laid down in our own Colony being altogether of an independent character, we might originate a system of our own, on any plan that might appear to offer the most advantage, without coming into contact, except at Albury, with any system adopted in other Colonies? You might.

70. *By Mr. Irving*: Would there not be danger from thunder storms? None whatever with these instruments, as you will see from the circular before you that no worse effect than the ordinary deflection of the needle can be produced by the passage of the lightning along the wires. The action of the needle being secondary, it would follow that the utmost power of the fluid would affect only the coils beneath the plate, the worst consequence being, as I have stated, the deflection of the needle. (*The witness illustrated this point by reference to the instrument on the table.*)

71. Would not a thunder storm interfere with a message travelling at that moment? It would

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- would if the wires were carried above ground, hence the reason of so many English lines being sub-soiled.
72. What would be the practical effect of a thunder storm? It would be impossible to Telegraph certainly through a thunder storm with any instrument that carries its wires through the air.
73. *By Mr. Cowper*: You are not yourself contemplating to become a contractor to carry out these works? I think not; I would much rather say what the price of the materials will be, and let the construction of the line be contracted for by other parties. I felt the peculiarity of my position in first offering them to the Commissioners—that I seemed to be recommending them to enter upon works which they must apply to me to carry out. In July last I offered them a hundred miles of wire, with all the necessary insulators, screw-ratchets, winding apparatus—everything but posts and labour—for £23 a mile; that was refused.
74. Do you allude to the Commissioners of Railways? Yes.
75. At that time had they any authority to enter into the work? I do not know what their authority might be; I am aware that His Excellency wrote about that time urging their attention to the subject, and to take steps at once.
76. Between Sydney and Parramatta? Between Sydney and Parramatta. Their answer to me was that they did not consider that the time had arrived for the introduction of the Telegraph.
77. Your opinion with regard to the cost of constructing the line is not of very great value, as you are not acquainted with the cost of constructing such works in the Colony? I should not consider it worth much in opposition to such a man as Mr. McGowan.
78. Therefore, if any other person estimated the cost at a lower rate than you had done, you would not on that account think the estimate too cheap? It would depend on who the other person was. I should say, with all deference, what my opinion was, but at the same time I would admit that Mr. McGowan was in a better position than myself to give an opinion. I can merely state positively the cost of the material.
79. That is to say, such part of the material as you propose to import? Yes.
80. Not of colonial construction or manufacture? Not of colonial construction. The material imported would be what others would have to use on the line, as for instance, galvanized wire. My impression is that the Government would do the business much more economically by throwing it open to general contract, and supplying the parties with the necessary materials.
81. *By Mr. Irving*: What do you mean by the necessary materials? Imported materials.
82. *By Mr. Cowper*: Not the posts or material of colonial construction? I would leave that to the contractor.
83. You think it would be desirable for the Government to purchase the imported part of the work, and to leave the rest to the contractor? Yes, otherwise it would be a monopoly in the hands of a few men, who in other places had become acquainted with the construction of Telegraphs, while general contractors, feeling hardly safe in trusting their knowledge of the materials required, would shrink from attempting an estimate.
84. You would throw it open to competition, leaving it to any person to enter into it? Yes.
85. *By Mr. Irving*: Would you divide it? It might be let in one or in more contracts, according to circumstances.
86. *By Mr. Cowper*: You yourself have no experience as regards the interior of the Colony? I have not.
87. *By the Chairman*: Will you have the kindness to state to the Committee how many of these instruments you could supply at once? I have only two in Sydney.
88. *By Mr. Cowper*: Are there no others in the Colony? There are not.
89. They are £35 each? Yes.
90. *By Mr. Macarthur*: They may always be procured from England, I presume? Yes.
91. An instrument would be required wherever there was a station? One instrument. I may be permitted to draw the attention of the Committee to an ingeniously contrived alarm by the same patentee. (*The witness exhibited the same.*) The cost of this is £7 5s.; that estimated for by Mr. Mann is £35.

## APPENDIX A.

*The Magnetic Telegraph Company, (Henley's patent,) entirely dispensing with the use of the Voltaic Batteries, and always ready for instant use.*

The Magneto-Electric Telegraph presents many very important advantages over all Telegraphs hitherto invented. It is extremely compact and portable, as will be seen by the accompanying sketch, which represents the whole apparatus required (except posts and wires) for transmitting a message any required distance.

The instrument is worked by Magneto Electricity, and, from the simplicity of construction, is always ready for immediate use, without the least preparation or trouble, and can, therefore, not only be used as a stationary Telegraph, but, from its portability, is peculiarly adapted for the use of guards, on all lines of railway, who could, in the event of accident, or any emergency, immediately apply the instrument to the existing Telegraph wires on any part of the line. It is free from any expense whatever, after the first outlay, and not only dispensing with the cost and inconvenience of chemicals, repairs, and superintendence involved in the use of the Voltaic batteries, but actually substituting, for the present uncertain

uncertain system of transmission, one absolutely unerring, and that to an extent far beyond the power of any other Telegraph, which has been proved, by actual experiments, on existing lines.

A very severe test of the capability of a Telegraph, is a damp state of the atmosphere, especially when the earth is used (as it always is now) as part of the circuit. Every supporting post, when its earthenware insulators become covered with moisture, conveys a great part of the current to the earth, but, from experiments tried on the South Devon Railway, (known to be the worst insulated line in the kingdom,) and in the most unfavourable weather, the magneto-electric current from this machine was found to pass the whole distance of the line, and, also, through a great length of wire at each station, without any loss whatever; this arises not from the electricity being of a different kind, but from its quantity and intensity being so adjusted that the wet posts should offer more resistance than the whole length of the metallic wire. The magneto-electric apparatus (18 inches long by 4 inches wide) will transmit a current much farther than twelve 24-cell batteries, occupying a space of 19½ square feet.

Another advantage is, that the needles never move sluggishly when worked from a great distance, they move as rapidly and distinctly through 500 miles as one mile; and the clockwork for alarums may be entirely dispensed with, quite sufficient sound being obtained to call attention from an adjoining room by the mere vibration of the needle between two bells, when moved by a machine many hundred miles off, and, to persons acquainted with the trouble and annoyance attending the ordinary Telegraph alarums, this will be considered no small advantage.

It is a well known fact that the ordinary Needle Telegraph is entirely deranged by lightning; the polarity of the needles becoming displaced or destroyed, notwithstanding the protection of lightning conductors. With the Magneto-Electric Telegraph this can never occur; the only effect of the lightning is to deflect the needles as in the ordinary working.

One of the peculiar features of this invention is the use of electro magnets, having four poles, formed by two segments of a circle, with a magnetic bar freely suspended within them; thereby doing away with the retarding force of springs or other contrivances generally resorted to, to cause the needle to point to any particular direction; and, by placing the needles on vertical axes with a horizontal dial, a very feeble current is quite sufficient to move them.

From the absence of springs and adjustments, this instrument is peculiarly adapted for working a One Wire Letter Telegraph, or a Recording Telegraph, by which the message is marked or dotted on paper, and the dials for which can be substituted for the present.

The Magneto Telegraph instrument is not effected by any variations in the state of the weather.

The permanent magnets are entirely protected from the loss of power by a peculiar and simple arrangement of the armatures, and the apparatus is free from the complications of the ordinary Telegraphs for reversing and stopping the current, there being one unbroken circuit throughout.

The importance of being able to communicate *several thousand miles* with an instrument so portable and so simple, can readily be understood, when it is considered that the Telegraph instruments, at present in use, require, for a distance of only three hundred miles, the aid of several Voltaic batteries, and, in damp weather, it is difficult, with any number of cells, to obtain a perfect communication.

From the advantages offered by this invention, a considerable saving is effected in the cost of the wires, much smaller ones than those now in use being sufficient, and the additional wire required in other instruments for ringing the alarm bell being entirely dispensed with, as the wires conveying the messages serve for both purposes.

From the portability, economy, and impossibility of derangement of this instrument, which never requires any preparation or renewal, Telegraphic messages will now be brought within the reach of more limited enterprise, such as dockyards, detached factories, mines, hospitals, and all other establishments and institutions, *both public and private*, as well as of individuals, who, from the cost of the present system, are entirely precluded from the benefits of this rapid means of intercommunication; and Railway Companies having Telegraphs already established, would find, in the adoption of this instrument, a considerable saving.

The Magneto Telegraph instrument has been subjected to the severest trials, in all weathers, on existing lines of railway, in this Country and on the Continent, and has received the unqualified approbation of many of the leading scientific men in Europe (including engineers of the highest repute) who have pronounced it to be the most simple, powerful, and economical instrument, for Telegraphic purposes, yet invented. To illustrate its extreme simplicity, it is only necessary to state, (*its action being entirely mechanical and free from all chemical agency*), that a boy twelve years of age is perfectly competent to superintend and effectually work the instrument.

The proprietors of the above invention are now ready to execute works in England and abroad, which, from the economical advantages above set forth, they are enabled to do on a very reduced scale.

The instruments can be seen, and any information obtained at the temporary offices of the Magnetic Telegraph Company, 4, New Broad-street, London; and 2, Exchange Buildings, Liverpool.

Class 10, No. 428, in the Great Exhibition, North-west Gallery.



*REPORTS of trials made with the Magneto-Electric Telegraph on the South Devon Railway, under direction of Mr. Brunel, the Engineer, and on the Paris and Rouen, and Paris and Valenciennes Railways, by direction of the French and Belgian Governments.*

Letter from the Superintendent of Telegraphs of the South Devon Railway to the Patentee.  
Mr. W. T. Henley,  
Magnetic Telegraph Company,  
London.

Telegraph Office, South Devon Railway,  
Teignmouth, 20 August, 1850.

Sir,

As you expressed a desire to have my opinion of your Magnetic Telegraph instruments, after trying them on our line, I now send you the following particulars.

The instruments have been in work for 12 days, and the experiments tried with them proved highly satisfactory, although some of the days were *very wet*, and five miles of our wires stand close to the sea, which also affects the insulation of that portion of the wires.

There appears but little, if any, of the magnetic current to leak over the insulators, as it does with a current from galvanic batteries.

I have tried your instruments in various ways, and will send you an account of one trial made in the presence of Mr. Brunel, which proves their capability of working through a great length of line wire and a number of instruments. The trial was from Plymouth to Exeter and back, from thence to Newton, and completing the circuit to Plymouth by the earth; the length of line wires being 138 miles, and the number of instruments 23. Through this great resistance the needles at Plymouth and Exeter worked very strongly, and their dead beat is a great advantage in reading.

I believe lightning would not have the least power to destroy or reverse the magnetism of the inside needles, and this is a great point gained.

I find the needles vibrate with sufficient force to ring a self-acting alarm without the aid of a main-spring or train of wheels, and would ring *ad libitum*, and would not require an additional wire, nor increase the resistance in the wires connected with the needles; and, by having two bells dissimilar in sound, the instrument could be used as a Phonetic Telegraph with great advantage.

I must congratulate you on having invented a Telegraph that has long been desired for railway and other purposes, its action being certain, and the whole of its parts likely to keep in working order for a long time.

I remain, &c.,

THOS. WEBBER,

Superintendent of the Telegraphs.

*Report of Trials made in France.*

Two most successful and satisfactory trials have been made with Henley's Magnetic Telegraph instruments, one on the wires of the Paris and Rouen Railway, at the Office of the French Minister of the Interior, in the presence of the Director-in-Chief of Telegraphs, and the other on the wires of the railway from Paris to Valenciennes. At the Paris end the Director-in-Chief of Telegraphs for the French Government superintended; while at Valenciennes were present the Belgian Minister of Public Works, Count Shekendorff; the Prussian Ambassador, M. Mosay; the Chief Engineer of the Belgian Railways, Baron Devaux; M. Quetelet, and M. Cabry, Chief Engineer of the Belgian Government. The distance is 180 miles, being the longest Telegraphic line in France. After a most satisfactory series of trials on the single distance, first with the full power, and afterwards with one-twentieth of the power, the wires were connected so as to treble the total length of wire, making 540 miles to and from Paris and back—the magnetic message being communicated through the first wire, back by the second, through the third, and back again by the earth; and, contrary to what was anticipated, it worked through an enormous resistance as distinctly and rapidly as when only made to traverse the 180 miles with full power. The ordinary Telegraph, with battery power, used by the French Government, was then put in requisition; but not the slightest effect was produced. The Government Officers and others inspected the working operations from 10 to 3 o'clock, and expressed themselves perfectly satisfied with the success of the trials.

*Experiments made with Henley's Magneto Telegraph across the Serpentine by the Jury of Class 10, at the Great Exhibition.*

From the "TIMES," of the 25th of June, 1851.

"Some remarkable experiments were made yesterday in presence of the Jurors, with Henley's Magneto Electric Telegraph. Two lengths of gutta percha covered wire having been laid across the Serpentine and connected to the instrument, each length had a portion of the gutta percha cut away, and the wire well scraped to a bright surface. Notwithstanding this, however, the Telegraph worked well. One length of wire was then cut in two, and a long piece of uncovered bright wire was inserted between, yet the result was again satisfactory, the water failing to deviate the course of the electric current. The third experiment made consisted in cutting asunder the wire and letting the ends fall into the water at some distance apart from each other. Even through this defective insulation the instrument worked well, and it continued to do so after a still greater quantity of the gutta percha coating had been removed. These results place in a remarkable point of view the merits of this invention, whereby the inconvenience and expensive use of a galvanic battery to the present Electric Telegraph is entirely superseded."

From

From the "MORNING POST," of the 25th of June, 1851.

*Experiments with Henley's Patent.*

"Some interesting experiments were made yesterday with Henley's Magneto-Electric Telegraph, from one side of the Serpentine to the other, near to the Kensington Gardens bridge, under the inspection of the following gentlemen:—Jury of Class 10—Sir John Herschel, Mr. Glaisher, Baron Seguir, Professor Schubarlt, Professor Potter, Professor Quetelet, Mr. Dobson, and another Gentleman, both from Mr. Cubitt, the Engineer, Great George-street, Westminster.

"*First Experiment.*—Two lengths of gutta percha covered wire were taken across and immersed in the water, and connected to the instruments; each length of wire had a portion of the gutta percha cut away from the wire; the wire well scraped to a bright surface, and allowed to remain under the water. The instruments worked well through the attractive power of the water.

"*Second.*—The water not having taken the expected effect of deviating the course of electricity, one length of wire was cut in two, and a long length of uncovered bright wire was inserted between, and again let fall into the water. The instruments again worked well.

"*Third.*—The wire was again cut asunder, and each end let fall into the water, a distance apart from each other, whereby the current had to be made complete by the water intervening between the ends of the wire; even through this defective insulation, the instruments worked to the greatest satisfaction.

"*Fourth.*—A greater quantity of the gutta percha insulation was taken from off the wire which had not been cut, and the instruments continuing to work well, a correspondence was then commenced, and kept up for half an hour, from one side of the Serpentine to the other, between Mr. Dobson and the gentleman who was with him.

"Mr. Henley was highly complimented after the completion of the experiments, which occupied five hours."

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From the "NEW YORK TRIBUNE," of the 27th of May, 1851.

"The following extract is an American's opinion of Henley's Telegraph, in a letter written to the "New York Tribune" on the Great Exhibition:—

"I found one promising invention in the British department to-day, viz.: Henley's Magnetic Telegraph, or rather, the generator of its power. The Magnet, I was assured, *did not require nor consume any substance whatever*, but generated its electricity spontaneously, and in equal measure in all varieties of weather, so that the wildest storm of lightning, hail, snow, or rain, makes no difference in the working of the Telegraph. If such be the fact, the invention is one of great merit and value, and must be speedily adopted in our country, where the liability of Telegraphs to be interrupted by storms is a crying evil. I trust it is now near its end."

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1856.

NEW SOUTH WALES.

**HENRY HARVEY READ.**

(CLAIM FOR COMPENSATION.)

*Ordered by the Legislative Assembly to be Printed, 12 August, 1856.*

TO THE HONORABLE THE LEGISLATIVE ASSEMBLY OF NEW SOUTH  
WALES, IN PARLIAMENT ASSEMBLED.

The humble Petition of Henry Harvey Read, of George-street South, in the City of Sydney,  
sculptor, stonemason, &c.

MOST HUMBLY SHEWETH,—

That your Petitioner having been put to very great inconvenience and loss, by the construction of the Sydney Railway Bridge and Sewerage in George-street South, by the contractor having made free use of his property, and a quantity of stone having been placed thereon during the formation of the said Sewer; also having taken three feet of Petitioner's ground into the Railway line, besides the loss Petitioner has sustained by the erection of the dead wall directly opposite to your Petitioner's shop and premises, which previous to that time, and when rents were low, always commanded a good rental of two pounds per week; but, on the other hand, in consequence of the said dead wall, it has been the cause of lessening the rent to one pound per week, and has been tenantless for several weeks together; as those who tried to do business therein, after remaining for a week or two gave up the premises, stating that nothing could be done in consequence of the said dead wall.

That your Petitioner most respectfully begs to assure your Honorable House, that although there is a wide pavement in a line of the said premises, a greater number of pedestrians prefer going over the bridge to that of the pavement, the result of which is there is not that traffic directly by the said shop, which has decreased the value of the same, besides doing great injury to your Petitioner's business as a sculptor and tombstone maker, which was not the case previously.

That your Petitioner has a piece of ground on the south side of the Railway line, adjoining the same, which is divided from his place of business, and causes him great inconvenience, having to go over the bridge for all the water he requires from a spring in the said ground, which, previous to the Railroad being constructed, he procured with less time and trouble.

That your Petitioner has applied both to the Commissioners, and the Contractor, Mr. Randle, of the Sydney Railway, for some compensation for all the annoyance and injury your Petitioner has sustained, but no satisfaction has been tendered, they stating that it was not in their power to do anything in the matter.

Your Petitioner most humbly prays that your Honorable House, under the circumstances, will be graciously pleased to investigate your Petitioner's case, and cause such measures to be taken in favour of your Petitioner, as in the opinion of your Honorable House you may deem fit and proper.

And your Petitioner will ever pray, &c., &c., &c.

(Signed) HENRY HARVEY READ.



1856.

NEW SOUTH WALES.

## PUBLIC WORKS.

(PAPER FROM HIS EXCELLENCY THE GOVERNOR GENERAL.)

*Ordered by the Legislative Assembly to be Printed, 7 August, 1856.*

In the present state of the Australian Colonies, no subjects (Education excepted) are deserving of more immediate and more earnest attention, than those which, having reference to the various matters connected with the material wants of individuals and the public, are classified under the general head of "Public Works."

The title is simple, but it is comprehensive; for it includes all those works of construction, in which the community may be considered to have a special and peculiar interest—together with many others in which public and private interests may be combined in various proportions. In order, however, to afford some idea of the comprehensiveness of the title, it may be as well to enumerate the various classes of works which come within its scope.—

(1st.) Those by which the community is enabled to appropriate to its individual members such portions of Land as may be allotted to them,—namely, all those which come more peculiarly under the charge of the Survey Department.

(2nd.) Public Buildings :—All those erections which are required for the accommodation of the Officers performing the ordinary functions of Government—for the Administration of Justice—for the Punishment of Offenders—for the Defence of the Country.

(3rd.) Means of Communication :—All Roads, Bridges, Canals, Railroads, &c.

(4th.) Works whose object is to facilitate the External Trade of the Colony :—Harbours, Docks, Wharves, Storehouses, Lighthouses, &c., &c.

(5th.) Works which tend to the development of the Resources of the Country—such as Drainage, Irrigation, &c.

This enumeration, though it seems to indicate the comprehensiveness of the term, under which all these works are classified, can give but a faint idea of the extent to which the public interest is involved, in the proper organization of the Department or Departments of the Government, to which such an amount of responsibility may be entrusted. In order to make the extent and weight of this responsibility more evident, it will be advisable to consider each of these heads somewhat more in detail; and if in the course of this examination it be found that each different head may be said to dovetail into its neighbours, there will be some ground for concluding that unity of action, economy, and efficiency, will be promoted by the formation of a "Board of Works," in which all these heads will be represented, and their joint harmonious action provided for.

## I.—SURVEY DEPARTMENT.

It is impossible to exaggerate the importance to the Colony of the proper administration of this Department. Upon the energy, activity, and skill of the persons employed,

and upon the proper direction given to this energy and skill by the Head of the Department, must depend, in great measure, the settlement of the Country, and the development of its resources. If the Survey Department follows in the steps of the Settlers, merely marking out for them the Land which they have already selected for themselves, it deprives itself of the power which it ought to have, of guiding the stream of population; it compels the Settler to waste time and money in finding out for himself that which it ought to be the province of the Department to supply; and, above all, it renders the establishment of any proper system of internal communication almost impracticable. If, on the other hand, the Department has by prudent forethought obtained for the Immigrant that information of which he is sure to be in want,—if it has provided simple and effective means for placing this information at his disposal,—if such Land as may be most useful and attractive to the Settler has been prepared for occupation, by being surveyed and marked off in allotments of a suitable size,—if it has marked out the lines of communication by which the Settler will have to bring his produce to market,—and if it has, by the application of those means which science and experience have pointed out, done its best to secure that accurate determination of the boundaries of properties, upon which the certainty of the title of the Settler to the land which he has purchased must depend,—it will have done its duty to the Government, and the public, by facilitating the settlement of the Country, and by economizing the expenditure of the funds both of individuals, and of the public.

It is evident that this work of the Survey Department is connected most intimately with that of the Department to which the superintendence of the means of communication is entrusted—as also with that of the Department on which the charge of improvement of the Harbours, Docks, &c., is imposed. The development of the internal resources of the Country by means of drainage and irrigation is also entirely dependent upon the mode in which the work of the Survey Department is performed. It is hardly necessary to go into any proof of this. The Survey, if properly conducted, affords information not only as to the general character of the Country, and the outline of the natural features by which it is characterized, but it goes into specific details, as to the level of the different districts, from which the different data for laying out Roads, Canals, &c., can be deduced. The outline of the coast and the harbour is given, and also the soundings, so that here again any plan for improving the navigation can be discussed, without involving the expense of a separate survey.

2. The Department of the Colonial Architect, ought to provide for the erection of all the buildings required for the various Departments of the public service, and for maintaining them in a proper state of repair. This Department has an amount of responsibility thrown upon it which few can fairly appreciate. In addition to the numerous public buildings in Sydney and its immediate neighbourhood, the head of this Department is considered to be answerable for the erection of the Gaols, and other buildings connected with the Administration of Justice throughout the Colony. The Police buildings, too, are nominally under his charge, and these are, of course, spread over the whole area of the Colony, so as to render any effective superintendence a matter of great difficulty. It is this difficulty which renders it desirable that this Department should be connected with those of the Survey, Railroads, &c.; by so doing, the work which, in any given district, might be of too trifling a character to justify the employment of an officer to superintend or inspect it, but be looked after by some person whose more special duty might be in connection with the Survey Department, or that of the Roads or Railroads, but who would be an officer of the Department of Public Works; and a perfect guarantee would thus be obtained that the work had been properly performed.

In the present state of the Colony, the direction and character of the roads by which the communication of the interior with the coast is maintained, is a matter of most vital importance. The rivers which discharge their waters on the east coast are too few in number, and have too short a course to justify any attempt to base upon them a system of internal navigation, even for the narrow track between the dividing range and the sea. Even were the character of the country such as to offer facilities for this purpose, the expense of such an undertaking would be too great for the Colony; and, as the general features of the country are broken and irregular, any attempt to carry out such a scheme would be abortive.

This

This being the case, the Colony must depend upon roads as the only means by which the internal traffic of the country can be maintained; and the few following facts bearing upon the comparative cost of transport upon Railways, and common roads will, I think, be sufficient to convince any one that a judicious economy would dictate the construction of Railroads of some kind or other, in preference to the ordinary macadamized road.

From experiments upon the power required to move carriages upon roads of various descriptions, it has been found that upon a level macadamized road of the best kind, a horse in a single cart may draw 25 cwt., in addition to the cart; but when the materials are not of the best description, 15 cwt. is the measure of his work. On a level Railroad, a horse will draw 12 tons, of which 8 tons may be put as net weight. His work, therefore, on a Railway would be eight times as great as upon a road. By other calculations embracing a greater variety of particulars, it would appear that the cost of conveyance upon a good macadamized road would be, about 9d. per ton per mile, while on a railroad it would not exceed 2d. per ton per mile. This is the result of inquiries made in England; and although in this country the facts upon which conclusions of this kind can be based, have not been so carefully collated, yet it is certain that the results would be similar in character, though not perhaps in amount.

By Returns which have been furnished from different parts of the Colony, it would appear that the cost of transport varies, even at this season of the year, from 6s. to 1s. 1d. per ton per mile, for goods conveyed by the ordinary roads,—while the charge by the Railway from Sydney to Parramatta, is 7s. per ton, or at the rate of 6d. per ton per mile,—and this along a line of road not yet complete, and not admitting, therefore, of the most economical arrangements.

I am not in possession of data which will enable me to form an estimate of the actual amount of transport along the different roads of the Colony. With regard, however, to one line of road, and that an important one, I have information sufficient to enable me to estimate the actual saving which would accrue when a Railway is substituted for the present Southern Road. By Returns which have been sent in, it appears that, between Campbelltown and Sydney, the traffic backwards and forwards amounts to 8,750 tons in the course of the year; the charge for such transport varies from 1s. 6d. to 2s. 5d. per ton per mile, the distance being 33 miles, and the total cost of transport £29,000—the average rate is 2s. per ton per mile. If the articles, consisting of agricultural produce, down to Sydney, and different sorts of stores up from it, were conveyed by rail at the high charge of 6d. per ton per mile, the total cost would be £7,220, and the actual saving to the settler £21,780 per annum; and were the Railway charge only 3d. per ton per mile, the saving would be £25,390. These sums would, at 6 per cent., represent respectively capital of £363,000 and £423,160. These facts are sufficient to show the superiority, in every way, of the Railroad over the macadamized road, even in point of economy. But whether Railroads be taken as the best, and only mode of constructing the principal lines of communication or not, it is evident, that if the Colony is to make any progress at all, that much more attention must be paid, than has hitherto been the case, to the various means of facilitating the transport of passengers and goods from one part of the Colony to another.

4. If Roads are of importance to the internal traffic of the Colony, Docks, Wharves, Light Houses, are of equal importance to the external trade. It is hardly necessary to go into any detail to prove this, or to point out that, with regard to most of these works, they are not, in a certain sense, profitable,—that is, they do not hold out sufficient inducement to private enterprise to justify individuals in expending capital upon them; in fact, the advantage to be derived from them is to be seen more in the general facilities afforded to trade, than to the increase and development of any particular branches of traffic upon which the cost of the works, of whatever description they may be, might be made a charge.

5. It is unnecessary to say much as to the works of drainage and irrigation. These, especially the latter, will, it appears to me, assume, in a few years, an importance which will fully justify the Government in dealing with them on a scale which private individuals could not afford to do. I have, therefore, mentioned these, merely for the purpose of drawing attention to them; I am not aware that at present there are any undertakings of the kind contemplated.

6. Having in the former part of this Minute called your attention to the extent and importance of the works, which, as being of a character peculiarly beneficial to the public, should be managed either by the General Government, or by the public, acting through the medium of local municipal bodies, it would seem advisable to determine the principle which should guide the Government in assuming to itself the superintendence of some of these undertakings, and in handing over others to be dealt with by the local authorities. It appears to me that a plain and simple rule might be laid down, founded upon the known and acknowledged principles of municipal action, and which would leave no opening for doubt or dispute. The rule might be stated broadly as follows:—The party who furnishes the means for carrying out any given work has a right to make his own arrangements for its execution. If, therefore, the funds for any given work are provided out of the General Revenue, or are raised by Loan, secured on such Revenue, the General Government, as Trustee for the community at large, is bound to look to the proper application of the money; should, on the contrary, the necessary funds be raised by corporate bodies or individuals, then on these bodies or individuals must rest the responsibility of conducting the work. Should, however, application be made to the General Government for assistance, towards any undertaking, whether by corporations or individuals, the grant of such assistance must, of course, be coupled with an assumption of some power to check or control the expenditure upon an undertaking in which the general community would have then a special interest. The nature of the control to be exercised would, of course, vary according to circumstances.

7. Under the rule just laid down, most of the classes of Public Works before enumerated will come under the supervision of the Government. The Survey Department, for instance, is one with which neither corporations nor individuals can claim to interfere. The Legislature has determined, and, in my opinion, most wisely, that the main lines of internal communications shall be undertaken by the Government. Several, indeed nearly all, of the Public Buildings are paid for out of the General Revenue; and this will also be the case with the works for the improvement of Harbours, Docks, Wharves, &c. The Government, therefore, must take charge of these. Under these circumstances, the constitution of the Department upon which such a heavy amount of responsibility will be entailed, and to which such a large discretion must be granted, is a matter of no trifling importance.

8. Before I proceed to explain my views with relation to the organization of this Department, I wish to bring under your notice, in as prominent a manner as possible, the state and condition of the Departments to which the Government is now compelled to entrust the charge of works whose importance, whether measured by their cost or by the results which may be expected from them, cannot be too highly estimated.

9. With relation to the Survey Department, I need only appeal to the Report which was laid by me on the Table of the Legislative Council. It was the result of the labours and investigations of a Board of Officers peculiarly qualified to deal with such a subject; and it bore out fully the opinions which I had previously expressed in my Minutes to the Executive Council, and which further experience has only served to confirm.

10. With regard to the Department of the Colonial Architect, the investigations which have taken place during the last Session of Council have clearly shown that the work to be done by the Officer at its head was too varied in its character, too great in amount, and too far removed from his immediate control, to admit of being satisfactorily performed; and it was also proved that the assistance afforded to him by the Government was of an inferior description, and inadequate in amount.

11. With regard to the Railways, the present Board of Commissioners, two of whom are unpaid, and, therefore, to a certain extent, irresponsible, is evidently an arrangement of a temporary character, and has so been considered from the commencement; and though the Government has had no reason to be dissatisfied with the mode in which these gentlemen have performed their duties, yet it can hardly be supposed that a Board so constructed will be able to deal with the many intricate questions which will arise out of the development of the Railway system, questions which will call for constant reference to the Government, as upon the character of the decision given, consequences of the utmost importance may hinge.

12. Looking, therefore, to the many and varied interests at stake, and to the magnitude of the expenditure which must necessarily be incurred, I am of opinion that the Officer at the head of the Board of Works must be identified with the Government of the day,



day, and must have a seat in either the Legislative Council, or the Legislative Assembly, in order that the explanations, which will always be required, may be given by an Officer thoroughly acquainted with all the details of the work carrying on in the various Departments under his superintendence.

13. The Chairman or President will be the responsible head of the Department of Public Works; but, as it is proposed that he should be a Member of the Ministry of the day, he cannot be expected to possess that amount of knowledge which would qualify him to discuss and decide upon questions of a scientific and professional character. He will, therefore, need assistance and advice in these matters; and the permanent Board should consist of the officers at the heads of the subordinate departments, viz.:—The Survey Department—that of the Roads and Railways—that of Docks, Wharves, and Harbours—and that of the Public Buildings. To the opinion of a Board thus constructed every deference will be due, provided, of course, that the professional members are appointed with a due regard to their scientific attainments, and to their practical acquaintance with the duties of the different departments.

How, then, can the Government be certain of finding officers possessed of the necessary amount of information and intelligence? It appears to me that the only security for this will be the construction of a body of trained subordinates, by whom all the duties of the departments will be performed, and from whom the best qualified will, when a vacancy occurs, be selected to fill the higher offices in the department.

I look upon the constitution of such a body as being of the greatest importance, with reference to the working of the department itself, and as likely to lead to important and beneficial results upon the education of the community. At present, when the Government requires the services of Surveyors, Clerks of Works, &c., it is with the utmost difficulty that properly qualified persons can be engaged. Application has to be made to the Colonial Agent, in England, to select proper persons; and, owing partly to the defects in your system of agency, and partly to the difficulty of engaging first-rate men to leave England, the Colony is obliged to put up with men of inferior acquirements, whose passage to the Colony, and that of their wives and families, has to be paid for at a high rate.

This state of things cannot be allowed to continue. The inhabitants of the Colony have a right to expect that their children should, if qualified, be entitled to look forward to employment in the service of the Government; and if proper inducements are held out, and proper opportunities of instruction provided, I see no reason to doubt that an ample supply of well-educated young men might be induced to enter a service in which promotion is guaranteed to industry and ability, and the road to the highest offices is thrown open to all.

I have, therefore, no hesitation in submitting to the Council the outline of a constitution for the Board of Public Works, which, if carried out cautiously, and with a proper consideration for the requirements of the public service, will, I have no doubt, in the course of a few years, be productive of the best effects, not only on the administration of the Department of Public Works, but upon the character of the education given to the youth of the Colony.

I propose, then, that the officers of the Department of Public Works should form one body, consisting of four superior officers, who may be termed Inspectors, who will be members of the Board of Works, and Chiefs of the subordinate departments of—

Deputy Inspector,  
District Engineers,  
Assistant Engineer,  
Cadets.

To begin with these last, I should propose that, annually, or twice every year, notice should be given of the number of vacancies among the Cadets, and that candidates should be invited to send in their names to the head of the department. Certain qualifications, as to age and physical ability, would be insisted upon, and the candidates will be subjected to an examination, by which (a minimum amount of information being established) the relative position of the Cadets in the department will be fixed.

When a Cadet has been admitted, he will undergo a course of practical training in the Survey and other Departments of the Board of Works; during which probation he will

receive only the amount of pay which may be sufficient for his support, and he will be subjected to periodical examinations. Should he, at the end of this period of probation, prove to the satisfaction of the Board, his possession of sufficient practical and theoretical knowledge, he will be appointed Assistant Engineer; and, being once enrolled upon the strength of the department, will rise gradually by seniority through the various ranks of District Engineer, Deputy Inspector, &c., till he attains the highest rank of Inspector.

A change of system so complete cannot, of course, be carried out at once to its full extent. The higher offices of the departments must be filled up at present by those who may be found best qualified to perform the duty; but effect may be given to the proposal to admit Cadets; and a guarantee can be given that their promotion shall be secured to them should they prove to be properly qualified.

I have not attempted in this sketch to give even an approximation to the number of officers for whom employment may be found. It is obvious, however, that the Survey Department will absorb a great number; and when the Railway system is more fully developed, a District Engineer, or person of equivalent rank, will be required for about every forty or fifty miles of Railway.

Hereafter it will probably be found desirable to have a body of artisans attached to the department, under charge of its officers, to whom some privileges may be granted, upon condition of their binding themselves to serve a certain number of years under a particular system of discipline. These men might act as chainmen to the Surveyors; as mechanics under the Colonial Architect; as foremen under the Railway Inspector, &c.; but this does not form part of the scheme now submitted, which is limited to the formation, from among the children of the Settlers, of a body of officers, to be properly trained to the performance of the duties of the Department of Public Works.

W. DENISON.

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1856.

NEW SOUTH WALES.

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 COLONIAL ARCHITECT'S DEPARTMENT.
 

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*Ordered by the Legislative Assembly to be Printed, 14 August, 1856.*

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THE COLONIAL ARCHITECT to THE COLONIAL SECRETARY.

*Colonial Architect's Office,*

*Sydney, 29 July, 1856.*

SIR,

Referring to your letter of the 22nd of March last, No. 90, requesting me, as soon as able to form an opinion, to report as to the number and character of the officers required to enable me to perform my duties satisfactorily, and the character and ability of those at present employed,—

2. I do myself the honor to state, that on taking charge, I found the actual strength of the Department to be as follows:—

- 1 Clerk of Works, stationed at Moreton Bay.
- 1 Clerk of Works, stationed at Newcastle.
- 2 Foremen of Works,
- 1 Assistant (as Draftsman), } At Office, in Sydney.
- 1 Temporary Clerk of Works, employed on new works in Sydney, and paid out of Votes for same.
- 1 Temporary Clerk, employed on Abattoir, Glebe Island, and paid out of Votes for that work.
- 1 Temporary Clerk, employed at Menangle, and paid out of Vote for Bridge.
- 1 Working Foreman, at Bathurst, and paid out of Votes for works there.
- 1 Chief Clerk,
- 1 Clerk, 2nd class,
- (paid out of Votes for Roads).
- 1 Clerk of 3rd class.
- 1 Extra Clerk. } Office in Sydney.

3. These have since been reduced by the Clerk of Works at Glebe Island, the works at which place have been discontinued; and the Clerk of Works at Menangle, the Bridge there being completed.

4. The only officers whose services are available in Sydney, and for the general duties of the Department, are—

- 2 Foremen of Works,
- 1 Draftsman,
- 1 Temporary Clerk of Works,
- 4 Clerks;

and the professional assistance is so entirely inadequate, as to compel me to devote the greater portion of my own time to minute supervision, and the inspection in detail of works in hand; and necessitates either the entire neglect, or very imperfect performance of duties of a comprehensive and more important nature. The few officers stationed in the country, are only available for works situated near the immediate localities in which they are placed, and the great majority of Police and other buildings distributed over the country are quite beyond my supervision or control. The insufficiency of the central staff, moreover, prevents my making personal inspections of works in the less remote localities, or acquiring any other information than such as can be gathered from occasional and imperfect representations of unqualified persons. Neither can I despatch any officer for such purposes, unless to the detriment of other business of equal or greater importance.

5. The appointments of First Clerk of Works, and Second Clerk of Works, were vacant when I took office, and still continue so.

6. As regards the character and ability of the officers at present employed, I have seen no reason to question their fitness for their respective offices; but, from the crippled state of the Department, it is quite impossible to define and distribute the duties in a proper manner, and assign to each individual those which properly belong to him.

7. It is proposed, at an early period, to relieve me of the charge of the three main lines of Road, but this will favourably affect only my personal labours, and the clerical work of the office, as the Road Surveyors, by whom the works are carried out, will be also transferred to another Department. On the other hand, it is contemplated to entrust to me the supervision of works connected with Sewerage, Lighting, and Water supply. This, with the probable increase in the number and extent of works connected with the Public Buildings of the Colony, and the improved system of executing and superintending them which is so obviously desirable, but which with present means is impracticable, will cause the duties of this Department to be greatly increased.

8. The inadequacy of the salaries allowed to the superior officers of the Department seems long to have been admitted, and is now practically proved, by the impossibility of procuring gentlemen to fill the present vacancies, even at salaries considerably greater than those hitherto paid. It would be idle to expect that the duties of the Department, which require for their performance a high degree of skill and experience, can be carried out in such a manner as to afford satisfaction, unless officers of competent ability be secured; these cannot be had unless remuneration be offered somewhat commensurate with what they might reasonably expect from the pursuit of their profession in any other sphere.

9. I have, therefore, in my Estimate for 1857, which was submitted with my letter of the 17th instant, proposed the officers and scale of salaries which I consider indispensable for the proper working of the Department; and I would again beg to urge its adoption, as I am satisfied that, unless at adequate salaries, it will be impossible to retain gentlemen whose services it would be desirable to secure, and the efficiency of the Department must be seriously impaired.

10. The Estimate referred to, which has been furnished in detail, is (including temporary increase):—

	£	s.	d.
Colonial Architect..... ..	1,000	0	0
First Clerk of Works .....	675	0	0
Second Clerk of Works.....	575	0	0
Third Clerk of Works .....	400	0	0
Clerk of Works, Moreton Bay .....	575	0	0
Two Foremen of Works, at .....	260	0	0 each.
Draftsman .....	350	0	0
Chief Clerk .....	575	0	0
Clerk of Second Class .....	340	0	0
Clerk of Third Class.....	240	0	0
Extra Clerk .....	209	10	0
Messenger .....	85	3	4
Office Keeper.....	40	4	2

Since this Estimate was forwarded, the arrangement referred to for giving me the supervision of Water, Sewerage, and Lighting Works has been proposed, and for these duties an additional officer, an Assistant Engineer, at £750 per annum, will be required. The appointment will not, however, be needed until works of the kind specified are actually decided on.

11. Although the foregoing was given as an Estimate for 1857, the necessity for its adoption for the present year is equally evident, as the deficiencies and requirements which I have in this letter, and that of the 17th instant, endeavoured to point out, are of present existence, and prevent my placing the Department in a state of efficiency. I beg, therefore, to press my recommendation that it be carried into effect with as little delay as possible.

I have, &c.,

(Signed) ALEXANDER DAWSON,

Colonial Architect.

THE HONORABLE  
THE COLONIAL SECRETARY.

1856.

NEW SOUTH WALES.

# CIRCULAR QUAY.

*Ordered by the Legislative Assembly to be Printed, 16 September, 1856.*

RETURN to an *Order* of the Honorable the Legislative Assembly, dated 15 August, 1856, for—

“ Copies of any Report that may have been made, pursuant  
“ to instructions from the Government, on the defective con-  
“ struction of the Circular Quay, together with Copies of all  
“ Papers relating thereto, including any Estimates that may have  
“ been framed of the probable cost of repairs now considered  
“ necessary.”

## DEFECTIVE CONSTRUCTION OF THE CIRCULAR QUAY.

### SCHEDULE.

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## CIRCULAR QUAY.

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No. 1.

THE COLONIAL SECRETARY to THE COLONIAL ARCHITECT.

*Colonial Secretary's Office,  
Sydney, 19 March, 1856.*

SIR,

I am directed by His Excellency the Governor General to request, that in conjunction with the City Engineer, and with Mr. Trickett of the Sydney Mint, you will examine and report fully upon the plan and execution of the works at the Circular Quay.

I have, &c.,

W. ELYARD.

THE COLONIAL ARCHITECT.

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No. 2.

THE COMMITTEE appointed to examine and report upon the plan and execution of the work at the Circular Quay, to The Honorable the Colonial Secretary, forwarding their Report.

*Sydney, 2 May, 1856.*

SIR,

With reference to your letter, 19th ultimo, No. 118 A, conveying to us the instructions of His Excellency the Governor General, requesting us to examine and report upon the plan and execution of the work at the Circular Quay, we have the honor to state, that having examined the works and specifications, and given the whole subject our best consideration, we beg to submit the following Report.

2. With reference to the execution of work, the following remarks refer to the several descriptions of the same, as they occur in the specification, viz. :—

3. *The Piles* are in many places driven more than ten feet apart,—extending in some places to 14 feet, and are not squared full to the edges; they are not of such a length as the foundation requires, and few of them measure 14 inches square at the upper end; some would not square to more than 11 inches, but the piles generally would square to about 12 inches. Several of them are left at their full length, without the ring-head being cut off square; these have more or less sunk, and shew evidently, that they were driven no further than their length would permit, whether they had reached their bearing on a solid foundation or not.

4. *The Copper Sheathing* has in some places come off the piles, and in many places it is hanging loose upon them. In some places the nailing is inefficient; but, in a great measure, these defects are to be attributed to the piles not having been properly squared up to a fair and even surface, to receive the copper.

5. *The Cills*, or capping pieces, are generally 12 inches square, tolerably straight, but not very free from shakes; they bear very unevenly on the pile heads, and many are blocked up with large chips of wood. They are generally scarfed in an unworkmanlike manner between the piles, and secured with a spike nail driven through from the top side; in no case are they well scarfed and hooped together; but in many places they are broken and split up, where a good scarf well hooped would have saved them. The iron straps which fasten them to the pile heads are of the specified size, but are badly forged, and in few cases fit close to the timber; they are not properly secured with spikes, and in many places the spikes are entirely omitted.

6. *The Beams*. The scantling of the beams generally accords with the size named in the specification, and the beams are placed generally at the proper distance; but in one place, two rows of intermediate beams are omitted. The workmanship is badly executed, particularly the forged work; and in many places, the iron straps over the beams are not fastened to the capping pieces at all.

7.

7. *The Planking* appears in all parts to be very good, of its kind, and of the scantling required by the specification; but, in consequence of the beams being badly squared, the planks bear unevenly, and in many parts they have no intermediate bearing at all.

8. *The Braces.* The scantling of the braces, with few exceptions, accords with the specifications; but instead of being either "firmly bolted" or "strapped on the piles," as required by the specification, they are only nailed. In many instances the nails have drawn, and the braces are hanging by the top nail only, whilst other braces have come off entirely, and are missing. The system of bracing throughout is faulty, and by no means mechanically arranged. The mode of fixing is very defective, and renders them quite useless as braces; and thus the braces add more to the weight of the structure than to its stability.

9. *The Roadway* is not formed of asphalted concrete, as specified, but the planking has, in the first instance, been covered with a course of rubble-stone, over which Macadamized road-metal, to a depth of about ten or twelve inches, has been laid. The weight of the roadway is not greater than such a structure should be capable of bearing, in addition to the goods and merchandize which would necessarily be placed upon it in the loading and discharging of vessels. The settlement which has taken place in the structure generally, has caused undulations in the roadway, which interrupt the drainage, and causes much inconvenience, and which, if not remedied, will cause premature decay to the planking.

10. *Plan of the Works* is good, and well adapted to the purpose; and we are of opinion, that if the piles had all been squared to the required size, driven at the specified distance, to a proper bearing, properly braced and bolted together, that the fabric would have been substantial, very durable, and satisfactory in every respect.

Having stated that the work has been done in a very unworkmanlike manner, we think it necessary also to remark, that the specification was most loosely and carelessly drawn; and the superintendence of the work appears to have been conducted in an equally neglectful and careless manner.

In conclusion, we would observe that the general state of the work is such as to call for immediate attention. The part which abuts upon the old stone wharf is sunk, in one place, to the depth of two feet, and extends more or less over a space of about fifty feet in length, by the whole width of the wharf. Three beams are broken through, others are split, and thrown off their bearings, and the wharf in that part is in an unsafe state. On the western side, near the Government Stores, two more settlements have occurred, which may not, at present, be considered dangerous; but in order to prevent further destruction to the timbers and planking, and also to put the wharf in a safe and proper state, it is highly necessary that an immediate repair of all the defects should be promptly undertaken.

We have, &c.,

EDWARD BELL, M. Inst. C. E., City Engineer.  
JOSEPH TRICKETT, Sup. Coining Department,  
Royal Mint.  
ALEX. DAWSON, Colonial Architect.

No. 3.

THE COLONIAL SECRETARY to THE COLONIAL ARCHITECT.

*Colonial Secretary's Office,  
Sydney, 13 May, 1856.*

56-4394.

SIR,

I have the honor to transmit to you herewith the Report of the Committee appointed to examine into the plan and execution of the work at the Circular Quay, and I am directed to inform you, that it appears to the Governor General that the plan itself is most faulty, and that it would be better to fill up the whole of the space in rear of the two front rows of piles with stone or ballast, as in the event of this not being done the Government will be subjected to constant outlays for repairs.

## CIRCULAR QUAY.

2. His Excellency, however, instructs me to request, that you will prepare an Estimate of the cost of making the repairs, according to the plan proposed by the Board, and also according to the above-mentioned scheme of filling up.

I have, &c.,

W. ELYARD.

THE COLONIAL ARCHITECT.

## No. 4.

THE COLONIAL SECRETARY to THE COLONIAL ARCHITECT.

*Colonial Secretary's Office,*

*Sydney, 31 July, 1856.*

56-4394.

SIR,

With reference to my letter of the 13th May, I am directed to request that you will expedite the preparation of the Estimates, mentioned therein, for repairs, &c., to the Circular Quay.

I have, &c.,

W. ELYARD.

THE COLONIAL ARCHITECT.

## No. 5.

THE COLONIAL ARCHITECT to THE COLONIAL SECRETARY.

*Colonial Architect's Office,*

*Sydney, 7 August, 1856.*

SIR,

In attention to your letter of the 13th May last, No. 176, transmitting the enclosed Report of the Committee appointed to examine into the plan and execution of the work at the Circular Quay, and requesting me to prepare Estimates of the cost of the repairs proposed by the Board, and for filling up in rear of the two first rows of piles, as suggested by His Excellency the Governor General,—

2. I do myself the honor to transmit a list of the repairs recommended by the Committee, with a Report, and Estimate, in detail, of the cost of executing the same. These repairs, when carried into effect, will, I have no doubt, ensure the stability of the present insecure portions of the structure. I would at the same time beg to point out, that the present state of the Wharf is such as to render immediate repair indispensable. I have included in my Estimate for Public Works and Buildings a sum of £2,000 to meet this expense.

3. I also transmit herewith a Report and detailed Estimate, for filling in with ballast in rear of the front rows of piles, as requested.

4. I herewith transmit the Plans, shewing the extent of the sectional area proposed to be filled up with ballast.

I have, &c.,

A. DAWSON, Colonial Architect.

THE HONORABLE

THE COLONIAL SECRETARY,

&c., &c., &c.

[Enclosure 1 in No. 5.]

ESTIMATE for making good, defects Semi-Circular Quay, Sydney.

## REPORT.

Provision is made on the Estimate for the visible defects and repairs required generally to the Semi-Circular Quay, and which are enumerated in the accompanying list, made upon an inspection at the Wharf.

The above repairs are chiefly required in the front of the Wharf.

ESTIMATE



CIRCULAR QUAY.

ROW OF PILES.		ESTIMATE.				£	s.	d.
No.		From Campbell's Wharf.						
1.	renewing a portion of copper sheathing	...	...	...	...	1	5	0
2.	ditto ditto ditto	...	...	...	...	1	5	0
5.	ditto brace fixed with $\frac{3}{4}$ bolts	...	...	...	...	1	15	0
6 & 7.	ditto 2 braces ditto	...	...	...	...	3	10	0
8.	making good between cill and beam	...	...	...	...	1	10	0
	renewing brace and bolted to pile	...	...	...	...	1	15	0
	making good between plank and beam	...	...	...	...	0	5	0
9.	renewing brace and bolted to pile	...	...	...	...	1	15	0
11.	ditto 2 braces ditto	...	...	...	...	3	10	0
15.	ditto ditto ditto	...	...	...	...	3	10	0
17.	ditto part copper sheathing and renewing braces	...	...	...	...	3	10	0
20.	ditto brace and renailing strap	...	...	...	...	1	17	0
24.	ditto brace	...	...	...	...	1	15	0
30.	ditto sheathing and mooring post	...	...	...	...	1	15	0
<i>Dock-yard Steps.</i>								
43—50.	80 yards cube removing metal from roadway, and re-laying, at 3s.	...	...	...	...	12	0	0
	240 feet sup. planking laid, at 2s.	...	...	...	...	24	0	0
	480 feet run of beams taking up and re-laying, at 2s.	...	...	...	...	48	0	0
	240 feet run of cills taking up and re-laying, at 3s.	...	...	...	...	36	0	0
	80 feet run renewing, at 4s.	...	...	...	...	16	0	0
	24 piles driving, including strapping, at 50s.	...	...	...	...	60	0	0
	96 feet new pile scarfs on top, with rings and bolts, at 6s.	...	...	...	...	28	16	0
	480 feet Muntz metal fixed, at 1s.	...	...	...	...	24	0	0
60—70.	tarring new cills	...	...	...	...	0	15	0
	120 yards cube removing metal from roadway, and re-laying, at 3s.	...	...	...	...	18	0	0
	360 feet sup. 4-in. planking laid, at 2s.	...	...	...	...	36	0	0
	700 feet run beams taking up and re-laying, at 2s.	...	...	...	...	70	0	0
	360 feet cills taking up and re-laying, at 2s.	...	...	...	...	36	0	0
	90 feet cills renewing, at 4s. 6d.	...	...	...	...	20	5	0
	36 piles driving, including strapping, at 50s.	...	...	...	...	90	0	0
	144 feet new pile scarfed on top and ringing, at 6s.	...	...	...	...	43	4	0
	2 braces renewing and bolted, at £2	...	...	...	...	4	0	0
	20 feet copper sheathing fixed on pile, at 1s.	...	...	...	...	1	0	0
	30 feet ditto on mooring post, at 1s.	...	...	...	...	1	10	0
75—84.	110 yards cube removing roadway metal and re-laying, at 3s.	...	...	...	...	16	10	0
	330 feet sup. 4-in. planking laid, at 2s.	...	...	...	...	33	0	0
	620 feet run beams taking up and re-laying, at 2s.	...	...	...	...	62	0	0
	300 feet run of cill ditto ditto at 3s.	...	...	...	...	45	0	0
	108 feet run of cill renewing and scarfing, at 4s. 6d.	...	...	...	...	24	6	0
	30 piles driving, including scarfing, at 50s.	...	...	...	...	75	0	0
	120 feet run ditto new, and scarfed to old ones, at 6s.	...	...	...	...	36	0	0
	30 feet run tie brace to mooring post, at 2s. 6d.	...	...	...	...	3	15	0
	renewing 1 pile at end of overhanging cill	...	...	...	...	4	0	0
	ditto Muntz metal on 4 piles	...	...	...	...	8	0	0
<i>From end of stone wharf, at crane, to the Queen's Wharf.</i>								
1—8.	160 yards cube removing roadway metal and re-laying, at 3s.	...	...	...	...	24	0	0
	480 feet sup. 4-in. planking laid, at 2s.	...	...	...	...	48	0	0
	640 feet run cill taking up and re-laying, at 2s. 6d.	...	...	...	...	80	0	0
	640 feet run beams ditto at 2s.	...	...	...	...	64	0	0
	120 feet run cill renewed and scarfed, at 4s. 6d.	...	...	...	...	27	0	0
	44 piles driving, including scarfing, at 50s.	...	...	...	...	110	0	0
	256 feet run new scarfed piles, at 6s.	...	...	...	...	76	16	0
	360 feet run. renewing broken beams, at 4s. 6d.	...	...	...	...	81	0	0
	30 ditto ditto brace and bolts, at 2s. 6d.	...	...	...	...	3	15	0
14.	Covering pile with Muntz metal	...	...	...	...	1	10	0
	Refixing brace	...	...	...	...	0	10	0
16—19.	55 yards cube removing and re-laying road metal, at 3s.	...	...	...	...	8	5	0
	165 feet sup. 4-in. planking laid, at 2s.	...	...	...	...	16	10	0
	300 feet run. beams taken up and re-laid, at 2s.	...	...	...	...	30	0	0
	150 ditto of cill, ditto at 3s.	...	...	...	...	22	10	0
	50 ditto cill renewed and scarfed, at 4s.	...	...	...	...	10	0	0
	12 piles driving, including scarfing, &c, at 50s.	...	...	...	...	30	0	0
	48 feet run. new piles, including scarfing, at 6s.	...	...	...	...	14	8	0
20.	Refixing brace	...	...	...	...	0	17	0
21.	Ditto straps	...	...	...	...	10	0	0
	700 yards sup. of new stone metal on roadway, 6 inches thick, at 5s.	...	...	...	...	175	0	0
						1,739	19	0
Add 15 per Cent.						261	0	0
						£2,000	19	0

Colonial Architect's Office, Sydney, 7 August, 1856.

A. DAWSON, Colonial Architect.

## [Enclosure 2 in No. 5.]

## ESTIMATE for re-constructing Semi-Circular Quay, Sydney.

## REPORT.

This Estimate provides for the re-construction of the Semi-Circular Quay, as proposed by His Excellency the Governor General, by the removal of the stone-metal from the top of the whole timber platform of the wharf, as also the timber planking, cills, and beams at the rear of the two front rows of piles, and the space between the piles filled in with rough rubble-stone, or other material, the front face of which to be built to the thickness of at least six feet, with large flat rubble-stones built dry, and well bonded from low-water level, the largest and flattest stones to be placed in the lower levels.

The planks over the two first rows of piles to be also taken up, and laid upon transverse beams.

At the general level of the ground a portion of the present beams may be used for this purpose, and the planks and beams to be selected from the best of the old material.

Provision is also made for eight additional mooring posts, proposed to be driven in front of the stone wall, and strongly tied to the piles behind.

## ESTIMATE.

8,000 superficial yards road metal, removed and re-laid, at 3s. ...	...	1,200	0	0
8,000 ditto 4-inch planking taken up and removed, at 6d. ...	...	200	0	0
20,000 run. of beams taken up and removed, at 1s. 6d. ...	...	1,500	0	0
6,000 ditto of cills, ditto at 1s. ...	...	300	0	0
56 timber braces, fixed with bolts to every alternate row of piles (old timber) at £5 10s. ...	...	308	0	0
28,000 cube yards stone ballast, filled up between the piles, and bonded on front face with large rough stone blocks, at 7s. ...	...	9,800	0	0
8,000 sup. yards new roadway metal laid, at 6s. ...	...	2,400	0	0
8 mooring posts, similar in dimensions to those at present in front of the Quay, and sheathed with Muntz metal, at £30 ...	...	240	0	0
Add the proportion of the cost of repairs enumerated in Estimate No. 1, and which will be required in carrying out the works of Estimate No. 2 ...	...	1,800	0	0
		<u>£17,748</u>	<u>0</u>	<u>0</u>

A. DAWSON,  
Colonial Architect.

Colonial Architect's Office, Sydney,  
7 August, 1856.

## [Enclosure 3 in No. 5.]

## LIST of defects found on inspection at Circular Quay.

## Commencing at Campbell's Wharf.

row.				
1.	2 piles,	one 12 by 12 inches,	sill 6 feet,	overhang, copper sheathing defective.
2.	2 do.,	10 by 10 inches,		copper defective.
3.	2 do.,	do.,		1 bolt through.
4.	1 do.,	12 by 12 inches,		nearly round.
5.	2 do.,	13 by 10 inches,		braces secured with two spikes.
6.	2 do.,	do.,	do.	braces 10 by 6 inches.
7.	2 do.,	do.,	do.	do.
8.	1 do.,	12 by 12 inches,	bearers not resting on sills,	scarfs between the sills with one nail driven through from the top. Brace 12 by 4 inches, and not fastened at the end near wall, secured with two nails into each pile. Planks not resting on intermediate beam. None of the piles are sufficiently squared to admit of the copper being properly laid on.
9.	2 do.,	11 feet apart,	14 by 14 inches,	one nail in brace.
10.	2 do.,	12 do.,	12 by 12 inches and 13 by 13 inches.	
11.	2 do.,	12 do.,	11 by 12 inches, and 13 by 14 inches.	Braces too short. Iron straps badly made, and not properly fixed.
12.	3 do.,	2 do.,	14 by 14 inches, one 13 by 13 inches.	
13.	3 do.,		12 by 12.	None squared.
14.	3 do.,		12 by 12.	Intermediate beam of fir timber.
15.	3 do.,			No brace.
16.	3 do.,		1 pile 13 feet from wall,	and not resting on front of wall by 2 inches, but bearing on backing, 2 feet from face of wall.
17.	7 piles,	copper imperfect on one,	1 brace of,	1 pile 10 by 11 inches.
18.	8 do.			
19.	6 do.,	18'6 bearing,		1 pile left out.
17.	Sill overhangs	inside, between	10 by 11 feet.	
20.	1 brace off,	strap unnailed.		
22.	Mooring post,	copper not nailed.		
24.	Brace off.			
30.	Mooring post partly coppered,	opposite Water Police.	The sills do not rest upon the piles in many places. The heads of some of the piles have not been cut up square after the removal of the rings.	

Near

## CIRCULAR QUAY.

7

*Near the Dockyard Steps.*

- row.  
 43—50. The piles and platform have all settled down, and many of the braces are off.  
 54—56. Two intermediate beams are omitted.  
 60—70. Platform much sunk ; several braces off ; 1 pile not coppered ; 1 mooring post ditto.  
 75—84. Piles, sills, and beams sunk very much ; scarfs opened five and six inches ; beam to mooring post broken off. The platform very much sunk.  
 Two piles 14 feet apart.  
 Ditto 12 ditto.  
 Ditto 11 ditto.  
 Beam 10 feet overhang ; one mooring post and four piles partly uncoppered.  
 This finishes up to the Queen's Wharf Stairs.

*From end of stone wharf, at crane, to the Queen's Wharf Stairs.**Starting with a single pile.*

- row.  
 1. 6 piles all sunk, ranging from 2 feet in centre, 3 beams broken.  
 3. 10 do., all much sunk, particularly in centre.  
 2. 11 do., all sunk to about 1 foot in centre.  
 4. 11 do., sunk about 9 inches in centre.  
 5. 11 do., in good state and right size, with the exception of a few in centre.  
 6. 11 do., centre piles small.  
 7. 11 do., sunk considerably ; centre pile small, brace off.  
 8. 11 do., 2, 3, and 4 piles sunk, strap broken in fixing.  
 9. 10 do., 4th pile sunk, front straps not fastened.  
 10. 11 do., good.  
 11. 11 do., do.  
 12. 12 do., do.  
 13. 12 do., do., and mooring pile do.  
 14. 13 do., copper off one brace one end, and hanging down.  
 15. 11 do., braces off and hanging.  
 16. )  
 17. ) in irregular rows, and more or less sunk.  
 18. )  
 19. )  
 20. 5 piles brace hanging down.  
 21. 4 do. much sunk, mooring post.  
 22. 5 do. good.  
 23. 4 do. do.  
 24. 4 do. do.  
 25. 4 do. do.  
 26. to stairs, piles, &c., good, straps badly fastened, the space thickly interspersed with old piles.

7 August, 1856.



1856.

NEW SOUTH WALES.

# ABATTOIR, GLEBE ISLAND.

(MINUTE OF HIS EXCELLENCY THE GOVERNOR GENERAL.)

*Ordered by the Legislative Assembly to be Printed, 19 September, 1856.*

*MINUTE of His Excellency the Governor General.*

## ABATTOIR AT GLEBE ISLAND.

In the Minute which I laid before the Executive Council, on the subject of the Slaughter-houses at Glebe Island, I pointed out that one of the most important subjects for consideration was the means by which the meat, when dressed, was to be removed from the Slaughter-house to Sydney.

Whatever means may be adopted for facilitating the removal of the meat by the butchers, a large outlay must necessarily be incurred, and I am not aware that any means have been placed at the disposal of the Government to meet the outlay. Let Mr. Weaver be called upon to send in Estimates and a Report upon the different modes which have been suggested.

17 October, 1855.

W. D.

THE COLONIAL ARCHITECT to THE COLONIAL SECRETARY.

*Colonial Architect's Office,  
Sydney, 2 November, 1855.*

SIR,

In attention to your letter of the 17th ultimo, No. 528, relative to the removal of meat from the Slaughter-houses at Glebe Island, enclosing a copy of a Minute of His Excellency the Governor General upon the subject, and requesting me to send Estimates and a Report upon the various modes which have been suggested,—

2 I do myself the honor to state, that I have carefully considered this matter, and have weighed the advantages of the various plans which have been proposed for the conveyance of the meat from the Island to Sydney for consumption.

3. On referring to former correspondence on this subject, I find that when Glebe Island was fixed upon as the site of the Abattoir, it was considered that, to ensure uninterrupted communication, it would ultimately become necessary to erect a permanent bridge, from the end of Glebe Road to the Island; this, therefore, may be considered as the first mode by which the meat could be removed. I have, as yet, been unable to prepare detailed plans and estimates for such a work, but from the information before me, I cannot estimate the total cost of a bridge, with the necessary approaches, at less than £40,000. It should, however, be borne in mind, that if a bridge were erected at this point, a communication with West Balmain would be opened up, and if a toll for crossing the bridge were charged, a considerable revenue would probably be derived from it.

4. The second method of removing the meat, which I have considered, is by carrying it in carts, or otherwise on steamers, to ply between the Island and the Market Wharf. On calculating the quantity of meat to be removed, the space that would be available in a steamer suitable for the purpose, and the time of transmission, I find that two steamers could not convey the whole of the meat necessary for a day's consumption from the Abattoir to Sydney, in less than from five to six hours. Each steamer may be estimated to cost £4,500, and to entail a working expenditure of £4 10s. per diem.

5. A third mode by which the meat may be removed, is by establishing a Steam Punt, or Floating Bridge, between the Island and Pyrmont Point, from which it would be necessary to form a road to join the present road from Parramatta-street. The cost of such a punt, laying down the chains, &c., I estimate at about £5,000, and it would require a daily expenditure of about £4 10s. As the distance between Glebe Island and Pyrmont is only 360 yards, the whole of the meat could be conveyed, on a floating bridge 80 feet long, in about three hours.

6. In addition to the cost of the punt, the formation of the piece of road referred to, with the necessary landing places, may be estimated at £2,000, exclusive of any compensation which may be demanded by the proprietors of land through which it would pass.

7. The distance from Pyrmont Point to Parramatta-street may be considered an objection to this scheme, but in the event of the proposed bridge between Pyrmont and Market-street being carried out, which now appears probable, the meat would by that route reach Market-street almost, or quite as soon, as by steamers plying between the Island and that spot.

8. The daily expenditure which either of the last two modes involves representing as it would, even in the cheaper scheme, a very large capital, would make the first, namely, a permanent bridge from the Glebe Road, appear to be the most economical method of establishing a communication with the Abattoir, and, moreover, would not be liable to those accidents or interruption to the traffic, which, notwithstanding every precaution, will sometimes occur, should either of the other methods be adopted.

I have, &c.,

WM. WEAVER,  
Colonial Architect.

THE HONORABLE  
THE COLONIAL SECRETARY,  
&c., &c., &c.

I have carefully considered the Report of the Colonial Architect, upon the question raised in my Minute of 3rd March last, as to the means by which the meat from the Slaughter-houses at Glebe Island may best be conveyed to Sydney. The question is one which ought to have been settled before the site of the Slaughter-houses was determined, and the postponement of it till the present moment has placed the Government in a very embarrassing position; for, from the Report of the Colonial Architect, it would seem, that after an expenditure upon the buildings, the road to the Island, and the purchase of the Island itself, of £11,312 7s. 7d., a further sum of £40,000, at least, is required, to enable the butchers to get the meat from the Island to the Market.

It becomes, therefore, a matter of serious consideration, what steps the Government should take with reference to a subject, which, so far as regards the working of the scheme of a public Slaughter-house, is of paramount importance.

The questions which I wish to bring under the consideration of the Council, are,—

- 1st.—Which of the schemes for conveying the meat to town, suggested by the Colonial Architect, is, taking all circumstances into consideration, the most advantageous.
- 2nd.—Whether, under all the circumstances which the discussion of the first question will place before the Council, it would not be advisable to stop the present work at Glebe Island, and establish an Abattoir at some point of the Railway between Sydney and Parramatta, or at Parramatta itself.

First, then, with regard to the schemes alluded to in the Report of the Colonial Architect, there are,—

- 1st.—The construction of a Bridge between Glebe Island and the end of the Glebe Road, at a cost (estimated roughly) of £40,000.
- 2nd.—The establishment of Steam communication between the Island and the Market Wharf; for which purpose it will be necessary to purchase two steamers, at an estimated cost of £4,500 each, or £9,000; and at a further annual outlay, for working these steamers, of £4 10s. each, or £9 per diem, or about £3,400 per annum.
- 3rd.—The establishment of a Steam Ferry or Punt, from the Island to Pyrmont Point, and the formation of a road from the Point, to connect it with the road leading to the new Pyrmont Bridge. The cost of this is estimated by Mr. Weaver at £7,000, and the annual cost of working the Punt at £4 10s. per diem, or about £1,700 per annum.

Mr.

Mr. Weaver states, that the first scheme, viz., the erection of a bridge across from Glebe Island to the end of the Glebe Road, would be the cheapest of the three; but it does not appear to me that he has made this quite clear. In order, therefore, to enable the Council to judge of the relative economy of the different plans, a detailed Estimate of the annual cost of each is subjoined. This Estimate must, of course, include the cost not to the Government only, but to the butcher; and, consequently, to the community; and for this purpose, it must comprise all the items of charge.

These will be as follows:—

Interest of £40,000 (the cost of the Bridge), at 6 per cent.	2,400	0	0
Maintenance of Bridge, and a Sinking Fund for replacing a wooden structure, $2\frac{1}{2}$ per cent. on first cost .....	1,000	0	0
Salary of Collector of Tolls .....	150	0	0

Total of Government Charge ..... 3,550 0 0

To this must be added the extra cost to the butcher, who has to bring the meat from the Slaughter-houses all round by the Glebe, a distance of at least 2 miles; and as a cart will only take 1 bullock and 8 sheep, it would take 120 trips of a cart to convey the meat to town; that is, the cart would have to travel 480 miles. 20 carts would, therefore, be required; and as each cart, horse, and man, would, at least, cost £135 per annum, the extra charge would be .....

2,700 0 0

Making a Total of ..... £6,250 0 0

It is possible that some extra toll may be received at the bridge, which might serve to lessen the charge upon the meat taken across, but there are no data upon which to calculate the amount of this.

The cost of the second mode of conveyance may be estimated as follows:—

Original cost of two Steamers, say £10,000; Interest on ditto, at 6 per cent. ....	600	0	0
Repairs, Wear and Tear, Sinking Fund, at, say 20 per cent. on first cost .....	2,000	0	0
Cost of Working, Coal at £9 per diem .....	3,385	0	0
	<u>£5,985</u>	<u>0</u>	<u>0</u>

As the Steamers would only be employed for about 3 or 4 hours per day, the charge for wear and tear is very heavy; they might act also in the day-time as Ferryboats from Sydney to Balmain, and thus lessen the charge upon the meat; but here again there are no data upon which to calculate the saving.

The cost of the third mode of conveyance will be as follows:—

Cost of one Steamer and making landing-place, at £7,000; Interest at 6 per cent.....	£420	0	0
Wear and Tear, 20 per cent. on £5,000 .....	1,000	0	0
Cost of Working .....	1,692	10	0

Total Government Charge ..... £3,112 10 0

To this must, however, be added, the extra cost to the butcher of conveying the meat from the Island, a distance, taken across the proposed Pymont Bridge, of at least 1 mile—half that of the first scheme; the cost will therefore be 1,350 0 0

To this must be added the Toll of Pymont Bridge, say for each cart 6d., or for 120 carts, £3 per diem, or .....

£5,567 10 0

To

To the charge under the first and third heads must be added the deterioration of the meat carried along a dusty road and jolted in carts, for the extra distance.

It might be possible, by a different arrangement, perhaps, to make one steamer answer, in the second scheme, instead of two; but it is safer to calculate upon the maximum charge.

It is, therefore, evident, that the cost of the conveyance of the meat from the Slaughter-houses to Sydney, will vary—

From .....	£5,567	10	0
To .....	5,985	0	0
Or to .....	6,250	0	0

according as one or the other of these schemes is adopted.

I will now lay before the Council the data upon which the second question, viz., whether it would not be advisable to place the Slaughter-houses on the line of the Railway, will have to be decided. In the first place, it is evident, that any alteration of the present scheme must be debited with the whole of the expenditure which has taken place, namely, about £32,000, the probable cost of the new buildings, which may be put at £20,000.

The first item of charge, then, will be 6 per cent. upon this amount of £32,000 .....	£1,920	0	0
Cost of transport by Railway, of 50 tons per day, at 5s. per ton .....	4,562	10	0
	<hr/>		
	6,482	10	0
Against this must be set, the proportion of that sum of £4,562 10s. which will be paid to the Government .....	2,053	2	6
	<hr/>		
	£4,429	7	6
	<hr/>		

And there will, of course, be a large saving on the cost of driving bullocks and sheep to Sydney, from Parramatta; the cattle will be in better condition at Parramatta, having a larger range of paddocks to feed in, and less distance to be driven.

These advantages, however, will hardly admit of calculation, except, perhaps, that of the saving in the cost of driving 43,800 head of cattle, and 365,000 sheep, a long day's journey; and this cannot be put at less than £1,000, and would probably be nearer double.

There would be another advantage in the vicinity of the Slaughter-houses to the Railroad,—that the offal and manure would probably sell better than it would at Glebe Island.

I am strongly disposed to think, that this latter place will be in every way the best; it would *certainly* have claimed a preference, had it not been for the outlay which has already taken place at Glebe Island, by which this scheme, if now carried out, is burthened with an extra charge of £1,920 per annum; but as the Government is now called upon to discuss a proposition involving a possible outlay of £40,000, it would be desirable to consider the whole question, with reference to a state of things which has grown up since the commencement of the construction of the Slaughter-houses, and which will not hereafter be liable to alteration.

W. DENISON.



1857.

NEW SOUTH WALES.

## ABATTOIR AT GLEBE ISLAND.

(INHABITANTS OF SYDNEY AGAINST ABANDONMENT OF.)

*Ordered by the Legislative Assembly to be Printed, 13 January, 1857.*

To the Honorable the Legislative Assembly of New South Wales, in Parliament Assembled.  
The Petition of the undersigned Inhabitants of the City of Sydney,—

Humbly Sheweth,—

That your Petitioners, having been informed that the Government has some intention of abandoning the Abattoir on Glebe Island, beg to represent to your Honorable House, that such a decision is fraught with injury to the entire population of Sydney; and that if a policy so objectionable is carried out, and the present system of private Slaughter-houses in and near the Metropolis continued, the whole community, as a matter of course, will continue to be charged a higher price for animal food than they otherwise would be.

That your Petitioners beg to observe, that the Slaughter Houses in Sydney are a nuisance of great magnitude, and that the lately erected Abattoirs on Glebe Island are, from their *isolated position*, and yet close and *unobjectionable contiguity* to the City, very admirably situated for the purpose; and that, having been constructed in a most excellent manner, and a good cattle road having been formed and fenced from the Parramatta Road over a causeway to the Island, made at considerable expense, they consider that the abandonment of the place would be deplored by the community generally, and that such a procedure would entail upon the Colony a great and unnecessary loss of the public money, as from the nature of the buildings it is impossible to convert them advantageously to other purposes.

That your Petitioners desire respectfully to remark, that private Slaughter Houses, established in *various* positions, would be attended with many and great objections, and, beside those before mentioned, the hurtful and noxious effluvia prejudicial to health will arise from them in *several* localities.

That your Petitioners beg to represent to your Honorable House, that if a punt to carry twelve carts and horses (which would completely answer the desired purpose, and which, with all the necessary appliances, could be obtained, in thorough working order, for the sum of £1,100 (eleven hundred pounds), was to run from the wharf already made on Glebe Island, to Ballast Point, on the opposite shore at Pymont, the meat could be readily procured by the butchers' carts *in a distance of less than a mile and a half* from the George-street Markets; the slaughtering superintendence (so desirable to be particularly attended to) could be concentrated, the manure and offal easily obtained for the production of vegetables in the environs of Sydney, and, the Abattoirs being thus situated contiguous to the City, poor people would be enabled to obtain the inferior part of the animals killed, which would otherwise be thrown away.

Your Petitioners therefore, feeling assured that the compliance of your Honorable House with their prayer will most certainly be attended with incalculable good to the public, humbly pray that your Honorable House will be pleased to take the entire subject into careful re-consideration, and afford your Petitioners, and the community generally, such relief as the reason and justice of the case demands.

And your Petitioners, as in duty bound, will ever pray, &c.

[Here follow 2,318 Signatures.]



1857.

NEW SOUTH WALES.

## ABATTOIR AT GLEBE ISLAND.

(BUTCHERS OF SYDNEY, PRAYING THE COMPLETION OF.)

*Ordered by the Legislative Assembly to be Printed, 13 January, 1857.*

To The Honorable the Legislative Assembly of New South Wales.

The Petition of the undersigned Butchers of the City of Sydney and its environs,

HUMBLY SHEWETH :—

That your Petitioners have been extremely surprised at hearing that there is some intention to abandon the slaughter-houses which have been erected on Glebe Island.

That your Petitioners beg to remark, that they have for a long time been looking forward with great anxiety to the introduction of a better system than has hitherto been in existence for supplying the inhabitants of Sydney with animal food in good condition.

That your Petitioners respectfully assure your Honorable House that if there are to be public abattoirs at all, the community can obtain meat at a cheaper rate and in better condition from the slaughtering establishments in Glebe Island than from any other locality on the line of railway.

That your Petitioners have been informed that it is proposed to build slaughter-houses somewhere near Liverpool, and to have the meat forwarded to Sydney by railroad; and your Petitioners do not hesitate to assert, for very many reasons, that this plan will not be found to answer, particularly in the summer months, and that it must necessarily cause more handling of the meat than at the slaughter-houses on Glebe Island, from whence the meat could be moved from the hook into the cart, and, by means of a suitable floating punt or bridge, be conveyed in the same cart to the shops of the retail butchers.

That your Petitioners would respectfully observe, that the retail butchers would not be satisfied to leave the selection of the meat they should require to the carcass butcher, and, doubtless, it would frequently happen, if they were obliged to leave the selection to the carcass butcher, they would not be pleased with the meat on its arrival by the rail, and, in such case, great loss and inconvenience would be caused to all parties.

That it is the general practice of the retail butchers to inspect the carcass meat and choose for themselves, and, consequently, Glebe Island would be the most convenient position on that account, and if they were to proceed to Liverpool for this purpose it is quite certain that any expense incurred by the retail butchers would eventually fall on the consumer, and the necessity of proceeding to and returning from the Liverpool slaughtering establishments would add considerably to the price of meat all the year round, and further; it should be borne in mind, that Glebe Island, from its peculiar position, catching the sea breeze at all times, possesses great advantages for summer slaughtering.

That your Petitioners also respectfully suggest, that on Glebe Island there is ample room to establish soap boiling and candle factories, the curing of hides, and fellmongering establishments, and that no inconvenience would be caused to the public thereby.

That the facility of shipment without the expense of carriage is also a matter not to be lost sight of.

That your Petitioners are also of opinion that the offal of all kinds would bring a much higher price at Glebe Island than up the country.

Your Petitioners lastly say, that cheaper meat and in better condition can be sent to market if your Honorable House will complete the abattoirs in Glebe Island.

Your Petitioners, therefore, humbly trust that your Honorable House will not, after so great an expenditure of the public money, object now to the completion of the Glebe Island abattoirs when their establishment will most certainly be attended with incalculable public benefit, for the reasons herein set forth.

And your Petitioners, as in duty bound, will ever pray, &c.

[Here follow 132 Signatures.]

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1857.

NEW SOUTH WALES.

## ABATTOIRS AT GLEBE ISLAND.

(INHABITANTS OF SYDNEY AGAINST ABANDONMENT OF.)

*Ordered by the Legislative Assembly to be Printed, 3 February, 1857.*

To The Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Inhabitants of the City of Sydney,—

HUMBLY SHEWETH:—

That your Petitioners, having been informed that the Government has some intention of abandoning the Abattoirs on Glebe Island, beg to represent to your Honorable House that such a decision is fraught with injury to the entire population of Sydney, and that, if a policy so objectionable is carried out, and the present system of private Slaughter Houses in and near the Metropolis continued, the whole community, as a matter of course, will continue to be charged a higher price for animal food than they otherwise would be.

That your Petitioners beg to observe, that the Slaughter Houses in Sydney are a nuisance of great magnitude, and that the lately erected Abattoirs on Glebe Island are, from their *isolated* position, and yet close and *unobjectionable contiguity* to the City, very admirably situated for the purpose; and that having been constructed in a most excellent manner, and a good cattle road having been formed and fenced, from the Parramatta Road over a causeway to the Island, made at considerable expense, they consider that the abandonment of the place would be deplored by the community generally; and that such a procedure would entail upon the Colony a great and unnecessary loss of the public money, as from the nature of the buildings it is impossible to convert them, advantageously, to other purposes.

That your Petitioners desire respectfully to remark, that private Slaughter Houses established in various positions would be attended with many and great objections; and besides those before mentioned, the hurtful and noxious effluvia, prejudicial to health, would arise from them in several localities.

That your Petitioners beg to represent to your Honorable House, that if a punt, to carry twelve horses and carts (which would completely answer the desired purpose, and which, with all the necessary appliances, could be obtained in thorough working order for the sum of £1,100,) was to run from the wharf already made on Glebe Island, to Ballast Point, Pyrmont, the meat could be readily procured by the butchers' carts in a distance of less than a mile and a half from the George-street markets; the slaughtering superintendence (so desirable to be particularly attended to) could be concentrated; the manure and offal easily obtained for the production of vegetables in the environs of Sydney; and, the Abattoirs being thus situated, contiguous to the city, poor people would be enabled to obtain the inferior parts of the animals killed, which would otherwise be thrown away. Your Petitioners, therefore, feeling assured that the compliance of your Honorable House with their prayer will most certainly be attended with incalculable good to the public, humbly pray that your Honorable House will be pleased to take the entire subject into careful consideration, and afford your Petitioners, and the community generally, such relief as the reason and justice of the case demands.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 102 Signatures.]



1857.

NEW SOUTH WALES.

ABATTOIRS—GLEBE ISLAND.  
(PAPERS RELATIVE TO.)

*Ordered by the Legislative Assembly to be Printed, 17 March, 1857.*

RETURN to an *Order* from the Honorable the Legislative Assembly, dated 14 January, 1857, for—

- “ (1.) Copies of all Contracts entered into by the Government  
“ for the erection of the Abattoirs at Glebe Island, or for the  
“ performance of any Works in connexion therewith.
- “ (2.) A Return setting forth the amount already expended  
“ under such Contracts, or, otherwise, in reference to such  
“ Abattoirs and Works.
- “ (3.) A Statement shewing whether any of those Contracts  
“ have been suspended or stayed, and, if so, by what authority,  
“ and under what circumstances, and at what stage of the works  
“ such stay or suspension took place.
- “ (4.) A Copy of any Minute of the Executive Council in  
“ reference to the discontinuance of the Works at Glebe Island.
- “ (5.) Copies of any Reports or Surveys, other than the Report  
“ of Mr. Weaver, recommending the abandonment of the Works  
“ at Glebe Island.”

SCHEDULE.

NO.	PAGE.
1. Contracts .. .. .	2
2. Return shewing the amount expended .. .. .	6
3. A Statement shewing whether any of the Contracts have been suspended .. .. .	6
4. Copy of the Minute of the Executive Council, 19 November, 1855 .. .. .	7
5. Memo. of Colonial Architect .. .. .	7

## ABATTOIRS—GLEBE ISLAND.

No. 1.

CONTRACT with MR. RANDLE for erecting Slaughter Houses and Yards.

KNOW all men by these presents, that I, William Randle, of the City of Sydney, in the Colony of New South Wales, Contractor, am held and firmly bound unto Her Most Gracious Majesty Queen Victoria, in the penal sum of five hundred pounds sterling, to be paid to Her said Majesty, Her Heirs and Successors, for which payment well and truly to be made I bind myself, my heirs, executors, and administrators, firmly by these presents. Sealed with my seal, dated this this twenty-second day of May, in the year of Our Lord one thousand eight hundred and fifty-five.

WHEREAS the above bounden William Randle made the tender hereunto annexed, under the terms and conditions of a notice dated the sixteenth day of April, one thousand eight hundred and fifty-five, now last past, and published in the New South Wales *Government Gazette* of the seventeenth day of April, (of which notice a copy is also hereunto annexed) and at the price and under the stipulations in the said Tender mentioned or referred to, whereby he tendered to provide the materials for, and perform the works required in, erecting Slaughter Houses and Yards for the Public Abattoir on Glebe Island, in the County of Cumberland, and Colony aforesaid, according to certain plans, specification, and conditions, marked with the letters A, B, C, D, E, F, and G, and to which the said William Randle has set his hand at the time of executing these presents, and to complete the same within eight months from the date of the execution hereof in a substantial and workmanlike manner, according to the said plans, specification, and conditions, for the sum of thirteen thousand two hundred and fifty pounds, the work and materials to be subject to the approval of the Colonial Architect. And whereas the said tender was duly accepted by His Excellency the Governor of the said Colony, on the eighth day of May now instant, on condition that this bond should be entered into by him the said William Randle: Now the condition of the above written bond and obligation is such that if the said William Randle shall and will well and truly perform and fulfil the said tender and the contract arising out of such tender and the acceptance thereof as aforesaid, and all and every the terms, conditions, and stipulations thereof; and shall on or before the twenty-third day of May, one thousand eight hundred and fifty-five, deposit the sum of five hundred pounds sterling in the hands of the Colonial Treasurer of the said Colony as a collateral security for the faithful performance of his contract, and shall not withdraw the said sum until the due fulfilment of the same contract. Then this obligation to be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered, by  
 the said William Randle, }  
 in the presence of  
 WM. W. BILLYARD,  
 Civil Crown Solicitor.

WM. RANDLE.

*Colonial Secretary's Office,  
 Sydney, 16th April, 1855.*

### TO BUILDERS AND OTHERS.—SLAUGHTER HOUSES, GLEBE ISLAND.

TENDERS will be received at this Office, until Twelve o'clock on Monday, the 30th April, from persons willing to contract for the erection of Slaughter Houses and Yards for the Public Abattoir on Glebe Island.

Plan, specification, and form of tender may be seen, and further particulars obtained at the Colonial Architect's Office, Sydney.

Tenders to be endorsed "Tender for Slaughter Houses, Glebe Island."

Tenders must state the time within which it is proposed to complete the work, and at the foot of every tender there must be a memorandum signed by the party tendering, and  
 two



ABATTOIRS—GLEBE ISLAND.

two responsible persons, as sureties, agreeing to be answerable for the due performance of the contract, in the event of the tender being accepted, and undertaking, in that event, that they will severally execute and deliver at the Office of the Civil Crown Solicitor, in Sydney, within seven days from the usual notification of acceptance, a bond to Her Majesty in the penal sum of £500, for securing such performance, otherwise the tender will not be taken into consideration.

The party tendering, or an agent authorised in writing to act for him, is requested to attend at this office at the time appointed for receiving the tenders, to afford such explanation or information as may be required.

By His Excellency's Command,  
C. D. RIDDELL.

This is the notice referred to as annexed to my bond to Her Majesty, dated the 22nd day of May, A. D. 1855.

WM. RANDLE.

Witness—WM. W. BILLYARD.

TO THE HONORABLE THE COLONIAL SECRETARY, &c, &c., &c.

SIR,

In pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the materials and perform the various works required for erection of Slaughter Houses and Yards for the Public Abattoir on Glebe Island, agreeably to the plans and specification, for the sum of thirteen thousand two hundred and fifty pounds, (£13,250) and to complete the same within eight months from the date of the acceptance of this tender. Dated this thirtieth day of April, 1855.

WM. RANDLE,  
Bligh-street, Sydney.

*Memorandum*—Should the foregoing tender be accepted, I hereby agree to pay the sum of £500 into the Colonial Treasury, as security for the due performance of the work.

WM. RANDLE.

Witness—FREDK. WM. HOLLAND.

SCHEDULE of TENDERS for the erection of Slaughter Houses and Yards for the Public Abattoir on Glebe Island, received in pursuance of public notice, dated 16th April, 1855, published in the New South Wales *Government Gazette* of 17th, 20th, 24th, and 27th April, 1855; opened in presence of the undersigned on 30th April, 1855.

NO.	DATES OF TENDERS	NAMES OF PARTIES TENDERING.	PARTICULARS OF TENDERS.	PRICES DEMANDED.	SURETIES PROPOSED.
	1855.			£ s. d.	
1	Apr. 30	{ J. Inder, O'Brien, and Skelton . . . . .	{ To provide the materials and perform the works required in erecting Slaughter Houses and Yards at Glebe Island, according to Plans and Specifications: to complete in the time specified . . . . . for }	12,900 0 0	{ Mr. R. Cowan, George-street. Mr. J. Walker, Market-street.
2	" "	Wm. Randle . . . . .	{ Do. Do. Do. Do. } { to complete in 8 months . . . . . for }	13,250 0 0	{ To deposit £500 in the Colonial Treasury as security. Mr. J. Curtis, Sussex-street.
3	" "	A. & S. Loveridge . . . . .	{ Do. Do. Do. Do. } { to complete in 9 months . . . . . for }	13,568 0 0	{ Mr. J. Murphy, Strawberry Hill. Mr. W. White, Rushcutter's Bay.
4	" "	{ J. Consley and F. Maclean . . . . .	{ Do. Do. Do. Do. } { to complete in 13 months . . . . . for }	14,500 0 0	{ Mr. J. Hogan, Double Bay. Mr. R. Godson, William-street.
5	" "	{ T. Coghlan and C. Flett . . . . .	{ Do. Do. Do. Do. } { to complete in 14 months . . . . . for }	14,638 0 0	{ Mr. D. Coghlan, Mason. Mr. W. Johnson, Sussex-street.
6	" "	Holmes and Coney . . . . .	{ Do. Do. Do. Do. } { . . . . . for }	14,700 0 0	{ Mr. H. King, Circular Quay. Mr. J. Murphy, Strawberry Hill.
7	" "	W. Watkins . . . . .	{ Do. Do. Do. Do. } { to complete in 6 months . . . . . for }	14,906 4 0	{ Mr. T. Turner, Victoria-street. Mr. Chas. Kemp.
8	" "	J. and A. Sutherland . . . . .	{ Do. Do. Do. Do. } { to complete in 12 months . . . . . for }	18,150 0 0	{ Mr. G. Renwick, Parramatta-street.
9	" 28	J. Bradley, J. Gunning, J. M'Dermott, and J. Dyson . . . . .	{ Do. Do. Do. Do. } { . . . . . for }	51,828 0 0	No Sureties named.

*Opinion*—The lowest offer is that of Inder, O'Brien, and Skelton; it is, however, informal, the parties proposed as sureties not having signed the tender. From former experience of Government works undertaken by Mr. Inder—the ostensible party in this case, the others it is believed being working men—and his want of resources and means for carrying out a work of this importance, we should in any case hesitate to recommend the acceptance of the

the offer. The next tender, that of Mr. Randle, exceeds the lowest by £350 only, a difference of trifling consideration in a work of such magnitude; it moreover presents the advantage of a more speedy completion of the buildings, which is a matter of consequence, and as there can be no doubt of Mr. Randle's ability to carry out the contract, and the amount asked by him is considered by the Colonial Architect to be reasonable, we beg to recommend his offer for acceptance.

C. D. RIDDELL.  
JOHN STIRLING.  
WM. WEAVER, Col. Archt.

Appd.  
W. D.  
3 May, '55.

Parties infd.—  
Colonial Architect.  
Civil Crown Solicitor.  
8th May, 1855.

CONTRACT with Mr. RANDLE, for the formation of a ROAD from PARRAMATTA ROAD  
to GLEBE ISLAND.

KNOW all men by these presents that I, William Randle, of Sydney, in the Colony of New South Wales, Contractor, am held and firmly bound unto Her Most Gracious Majesty Queen Victoria, in the penal sum of Five hundred pounds sterling, to be paid to Her said Majesty, Her Heirs, and Successors, for which payment well and truly to be made I bind myself, my heirs, executors, and administrators, firmly by these presents. Sealed with my seal; dated this thirtieth day of July, in the year of Our Lord One thousand eight hundred and fifty-five.

WHEREAS the above bounden William Randle made the tender hereunto annexed, under the terms and conditions of a notice dated the fourth day of June, one thousand eight hundred and fifty-five, and published in the New South Wales *Government Gazette*, of the fifth day of June now last past, (of which notice a copy is also hereunto annexed,) and at the price, and under the stipulations in the said tender mentioned or referred to; whereby he tendered to provide the materials for, and perform the works required in, clearing and forming a road from the Parramatta Road to Glebe Island, in the County of Cumberland, and Colony aforesaid, according to certain plans and specification, marked with the letters A, B, and C, and to which the said William Randle has set his hand at the time of executing these presents, and to complete the same within three months from the twenty-third day of July instant, in a substantial and workmanlike manner, according to the said plans and specification, for the sum of two thousand and seven pounds ten shillings sterling; the work and materials to be subject to the approval of the Colonial Architect. And whereas the said tender was duly accepted by His Excellency the Governor of the said Colony, on condition that this bond should be entered into by him the said William Randle: Now the condition of the above-written bond and obligation is such, that if the said William Randle shall and will well and truly perform and fulfil the said tender, and the contract arising out of such tender, and the acceptance thereof as aforesaid, and all and every the terms, conditions, and stipulations thereof; and shall, on or before the first day of August, one thousand eight hundred and fifty-five, deposit the sum of five hundred pounds sterling in the hands of the Colonial Treasurer of the said Colony, as a collateral security for the faithful performance of his contract, and shall not withdraw the said sum until the due fulfilment of the same contract,—then this obligation to be void and of none effect, otherwise to remain in full force and virtue.

Signed, Sealed, and delivered,  
by the said William Randle,  
in the presence of

WM. RANDLE.

WM. W. BILLYARD,  
Civil Crown Solicitor.

ABATTOIRS—GLEBE ISLAND.

Colonial Secretary's Office,  
Sydney, 4 June, 1855.

TO ROAD MAKERS AND OTHERS.

ROAD FROM PARRAMATTA ROAD TO GLEBE ISLAND.

TENDERS will be received at this Office, until 12 o'clock on Monday, the 11th instant, from persons willing to contract for the clearing and formation of a line of Road from the Parramatta Road to Glebe Island.

Tenders to be endorsed "Tender for Road to Glebe Island."

Plan, section, specification, and form of tender may be seen, and further particulars obtained, at the Colonial Architect's Office, Sydney.

Tenders must state the time within which it is proposed to complete the work, and at the foot of every tender there must be a memorandum signed by the party tendering, and two responsible persons as sureties, agreeing to be answerable for the due performance of the contract, in the event of the tender being accepted, and undertaking in that event that they will severally execute and deliver, at the office of the Civil Crown Solicitor, in Sydney, within seven days from the usual notification of acceptance, a bond to Her Majesty in the penal sum of £500 for securing such performance, otherwise the tender will not be taken into consideration.

The party tendering, or an Agent authorised in writing to act for him, is requested to attend at this Office, at the time appointed for receiving the tenders, to afford such explanation or information as may be required.

By His Excellency's Command,

C. D. RIDDELL.

This is the notice referred to as annexed to my bond to Her Majesty, dated the thirtieth day of July, 1855.

Witness—WM. W. BILLYARD.

WM. RANDLE.

TO THE HONORABLE THE COLONIAL SECRETARY,

&c., &c., &c.

SIR,

In pursuance of advertisement in the *Government Gazette*, I, the undersigned, do hereby tender to provide the materials and perform the various works required in clearing and forming Road from Parramatta Road to Glebe Island, agreeably to the plan and specification, for the sum of two thousand and seven pounds ten shillings, (£2,007 10s.) and to complete the same within three months from the date of the acceptance of this tender.

Should this tender be accepted, I propose paying the sum of five hundred pounds into the Treasury, as security for the due fulfilment of the contract.

Dated this eleventh day of June, 1855.

WM. RANDLE,  
Bligh-street.

SCHEDULE of TENDERS for the clearing and formation of a line of road from the Parramatta Road to Glebe Island, received in pursuance of notice, dated 4th June, 1855, published in the *New South Wales Government Gazette*, of 5th and 8th June, 1855, opened in presence of the undersigned, on 11th June, 1855.

No.	DATE OF TENDER.	NAME OF PARTY TENDERING.	PARTICULARS OF TENDER.	PRICE DEMANDED.	SECURITY PROPOSED.
Only Tender.	1855.	Mr. Randle	{ To provide the Materials, and perform the works required in clearing and forming a Road from the Parramatta Road to Glebe Island, according to Plan and Specification; to complete in three months, . . . . for	£ s. d.	{ To deposit £500 in the Colonial Treasury.
	June 11			2,007 10 0	

*Opinion*—Although this is the only Tender, as it is considered by the Colonial Architect to be reasonable, and there does not appear to be a probability of any other being obtained, we beg to recommend its acceptance.

Mr. Randle.  
Colonial Treasurer.  
Colonial Architect.  
Civil Crown Solicitor.  
19 June, 1855.

Appd.  
W D.  
14 June, 1855.

JOHN STIRLING.  
WM. WEAVER, Col. Archt.

## No. 2.

A RETURN setting forth the Amount already expended on all Contracts entered into by the Government for the erection of the Abattoirs at Glebe Island, or for the performance of any Works in connexion therewith.

PARTICULARS.	AMOUNT.	TOTAL.
Amount paid as Compensation for Land resumed by the Government at Glebe Island, including the expense of Arbitration .....	.....	3,747 15 0
Payments made to William Randle for Works performed under Contract, viz. :—		
For Construction of Buildings .....	12,078 0 0	
Forming the Road .....	2,007 10 0	
Fencing do. ....	1,010 2 8	15,095 12 8
Payments made to William Randle for Works performed exclusive of Contracts, viz. :—		
Extra Work on the Buildings .....	357 12 7	
Forming an Embankment, &c. ....	1,592 14 10	
Forming a Dam .....	1,260 0 0	3,210 7 5
Expenditure incurred under the direction of the Colonial Architect :—		
Wages to Mechanics and Laborers .....	10,025 2 0	
Timber and Materials .....	860 8 0	
Ironmongery, Implements, and Stores .....	893 15 4	
Miscellaneous Items .....	495 2 6	
Transport of Materials and Stores.....	215 5 5	12,489 13 3
Stores issued by the Colonial Storekeeper .....		218 16 0
TOTAL .....	£	34,762 4 4

Audit Office, Sydney, New South Wales,  
10 March, 1857.

W. C. MAYNE,  
A. G.

## No. 3.

A STATEMENT shewing whether any of these Contracts have been suspended or stayed, and if so, by what authority, and under what circumstances, and at what stage of the works such stay or suspension took place.

By letter from the Honorable the Colonial Secretary, of 6th December, 1855, No. 621, the Colonial Architect was informed that his Report of 2nd November, 1855, relative to the several modes suggested for conveyance of the meat to Sydney, had been submitted to the Executive Council; that after consideration of the relative advantages and probable cost of each of the modes proposed, and also, whether the establishment of an Abattoir between Sydney and Parramatta, or at Parramatta, from whence the meat might be conveyed by Railway, would not be desirable, it had been decided not to incur further expense, after the completion of the existing contract, (that with Mr. Randle for the Buildings,) until the matter had been more maturely considered, and submitted to the new Legislature.

On the 6th December, 1855, the Colonial Architect pointed out the necessity for constructing service drains, to enable Mr. Randle to complete his contract, these drains not having been provided for. In reply, by letter from the Honorable the Colonial Secretary, 11th December, 1855, No. 625, Mr. Weaver was directed to ascertain from Mr. Randle the portions of work he might not then be in a position to complete, and as to the deductions from the contract in consequence. Having done so, Mr. Weaver proposed the omission of—

The pitched paving, pier stones, and fenders.

The stock and drafting yard fences.

Some of the posts, and all the longitudinal sleepers, with the fixing of the same, to the piling grounds.

The deal shoots and shelves to cattle out-houses.

The

The 2-inch lead piping, gun metal cock and brass ferrils.

Tarring the stock yard fences.

The iron rails, wrenches, guys and rods, drain gratings, gauze wire divisions, and wrought iron brackets.

For which Mr. Randle agreed to submit to a deduction of £1,172.

The Honorable the Colonial Secretary's letter of 1st July, 1856, pointed out that the real difficulty in the case arose from the large outlay required to bring the meat from the island, which had never been estimated for, and which would exceed the whole cost of the buildings themselves, and conveyed authority for dispensing with the above portions of the work.

Since the completion of the remainder of Mr. Randle's contract, nothing further has been done to the buildings.

A. DAWSON,  
Colonial Architect.

No. 4.

PROCEEDINGS of the Executive Council on the 19th November, 1855, with respect to completion of Abattoir on Glebe Island.

(Minute No. 55-41, confirmed 26th November, 1855.)

REFERRING to the proceedings on the 15th May last, His Excellency the Governor General lays before the Council a letter from the Colonial Architect, reporting on the several modes which have been suggested for conveying to Sydney the meat to be slaughtered at the public Abattoir in process of erection on Glebe Island, That is to say,—

- (1st.) The construction of a Bridge from the Island to the end of the Glebe Road.
- (2nd.) The establishment of Steam Communication between the Island and the Market Wharf; and
- (3rd.) The establishment of a Steam Ferry or Punt from the Island to Pymont Point, and the formation of a road from the point to connect it with the road leading to the new Pymont Bridge.

2. This letter is accompanied by an explanatory memorandum of the Governor General, pointing out the relative advantages and probable cost of each of these modes of conveyance, and suggesting for the consideration of the Council whether under all the circumstances of the case, it would not be better to stop the present works on Glebe Island, and establish an Abattoir between Sydney and Parramatta, or at Parramatta itself, whence the meat could be readily conveyed to Sydney by the Railway.

3. The Council advise that upon the completion of the existing contract for works on Glebe Island, (which of course it is not now in the power of the Government to interrupt,) no further expense should be incurred in respect to the proposed Abattoir, until the Government shall have had an opportunity more maturely to consider the question, and submit it to the new Legislature. The delay involved in this postponement is in some measure unavoidable, as a further vote is required for the works which it is now too late to ask from the present Council.

MICHAEL FITZPATRICK,  
Clerk of the Council.

*Executive Council Office,  
Sydney, 13 March, 1857.*

No. 5.

COPIES of any Reports or Surveys, other than the Report of Mr. Weaver, recommending the abandonment of the works at Glebe Island.

THERE are no other Reports or Surveys in this office connected with this subject, except those by Mr. Weaver, late Colonial Architect.

A. DAWSON,  
Colonial Architect.



1856.

## NEW SOUTH WALES.

## DEFENCES OF PORT JACKSON.

(PROCEEDINGS OF THE EXECUTIVE COUNCIL.)

*Ordered by the Legislative Assembly to be Printed, 26 November, 1856.*W. DENISON,  
*Governor General.**Message No. 7.*

The accompanying Papers bearing upon the question of the Defences of the Harbour and City of Sydney, are submitted for the consideration of the Legislative Assembly. They consist—

- 1st. Of the correspondence with Her Majesty's Government upon the subject of the constitution of a Force which would be required for the Defence of the Works in progress.
- 2nd. Of an Estimate for the completion of these Works, by the addition of Guns to the Battery on Pinchgut Island, to that on the point of the Domain, and to that at Fort Macquarie, which amount altogether to £12,113 8s. 10d.
- 3rd. Of a Memorandum submitted for the consideration of the Executive Council, in which the constitution of the Force required for the Defence of the City, and the mode in which the cost of the maintenance of this Force should be apportioned between the Colony and the Mother Country, was discussed.
- 4th. The Minute of the Proceedings of the Executive Council with reference to the matters alluded to in the Memorandum.
- 5th. Copy of a Despatch addressed to the Secretary of State, forwarding the Minute of the Executive Council above alluded to.

In bringing the subject of the Defence of the City of Sydney under the notice of the Legislature, the Governor General wishes to refer to the Papers laid upon the Table during the last Session, as expressing views which further consideration has not in any way modified or altered, and which, when taken in connection with those now submitted, will put the Assembly in possession of all the facts and opinions bearing upon a subject of no ordinary importance to the Colony.

In recommending the appropriation of the further sum of £12,113 8s. 10d. to cover the construction of some additions to the present Works, the Governor General is guided by a conviction that the outlay of this sum will add very much to the efficiency of the Works, by enabling the defenders to concentrate a much heavier fire upon the approaches to the Harbour, thereby rendering it very improbable that a vessel could make its way to a point near enough to the Town to allow its fire to do any injury of importance.

The Governor General wishes to call the particular attention of the Assembly to the principle upon which it is proposed to divide the expense of maintaining the Force, both Naval and Military, which will be required for the efficient defence of the Works, between the Colony and the Mother Country.

*Government House,*  
*Sydney, 26 November, 1856.*

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1856.

NEW SOUTH WALES.

## DEFENCES OF PORT JACKSON.

(PROCEEDINGS OF EXECUTIVE COUNCIL.)

*Ordered by the Legislative Assembly to be Printed, 26 November, 1856.**PROCEEDINGS of the EXECUTIVE COUNCIL, on the 17th November, 1856, with respect to the Defences of Port Jackson.*

MINUTE, No. 56-60—confirmed 24 November, 1856.

REFERRING to the proceedings on the 23rd July last, with respect to the Defences of Port Jackson, when the Council had before them a letter from Colonel Barney, R.E., submitting an Estimate of certain proposed additions to the Works of Defence in the vicinity of the City of Sydney, now in progress, the cost of which is estimated at £12,113 18s. 11d., His Excellency the Governor General again lays before the Council Colonel Barney's letter, together with the plans which the Council then desired to have submitted for their inspection, before expressing an opinion upon the works in question.

2. The Council advise that the following additions to the works now in progress be undertaken, viz. :—

- 1st. A ditch and palisade at Dawes' Battery.
- 2nd. A ditch and palisade at Macquarie Point, with an extension of the work for three guns.
- 3rd. An addition to the work at Fort Macquarie, to receive five guns.
- 4th. An extension of the work at Pinchgut, on the northern extremity, to receive one gun; at the southern extremity, two guns.

3. The Council further advise that a copy of this Minute, together with copies of the papers enumerated in the margin, be laid before the Legislative Assembly, and that the Assembly be invited to provide funds to meet the estimated cost, viz. : £12,113 18s. 11d., in addition to the £50,000 already voted for works of this nature.

EDWARD C. MEREWETHER,  
Clerk of the Council.

1. Governor General's Despatch to Secretary of State, No. 137, 8 Sept., 1855.
2. Secretary of State to Governor General, No. 41, 22 March, 1856.
3. Secretary of State to Governor General, No. 78, 20 June, 1856.
4. Colonel Barney's Reports & Estimates of Works, 27 June, 1856.
- 5 & 6. Memorandum of Governor General, laid before the Executive Council, 23 July, 1856, with Minute of the Council thereon.
7. Governor General's Despatch to Secretary of State, No. 127, 14 August, 1856.

GOVERNOR SIR W. DENISON, to THE SECRETARY OF STATE FOR THE COLONIES.

No. 137.

*Government House,  
Sydney, 8 September, 1855.*

MY LORD,

In a former Despatch, No. 29, dated 9 March, 1855, I brought under the notice of Her Majesty's Government the steps which I had thought it advisable to take with relation to certain Works of Defence, for which money had been voted by the Legislature during the Session of 1854, upon the recommendation of the Executive Government, and which had accordingly been commenced. In that Despatch I stated that I had inspected the points in the neighbourhood of Sydney which it would be desirable to occupy, and that I would submit plans of the works which it was intended to construct upon these points, and a detailed account of the provision which I trusted to be able to make for training an adequate number of men for their defence.

2. I submit herewith copies of the papers which were laid before the Legislative Council, when the subject was brought under consideration, with reference to the cost of the works, and of the men to defend them; I also forward plans of the harbour and of the works which it is proposed to erect. In these papers your Lordship will find a full explanation of the reasons which have induced me to adopt only a portion of the system of defence originally submitted by Colonel Gordon, and approved by Sir John Burgoyne; these reasons being, in fact, based not upon any objection to the scheme itself, but upon the impossibility of providing a sufficient force to man the outer works, unless at an expense which the Colony could not in justice be called upon to pay.

3. These reasons were considered sufficient by the Council, and a sum of £50,000 was voted for the works now proposed; a sum of £12,000 was also voted for the pay of a Company of Artillery for the year 1856; an addition of 50 men to the strength of the Sydney Police was sanctioned, and provision was made for the payment of the crews of two Gun-boats, one of which was to be a steamer. These works I propose to commence immediately, and I trust to have them ready to receive their armament in the course of a few months. I trust that the guns alluded to in my Despatch No. 52, dated 11 April, 1855, will have arrived by that time. The Harbour and Town of Sydney will then, so far, at all events, as the mere fortifications are concerned, be beyond the reach of insult.

4. The question, however, of the mode in which these works are to be manned, has yet to be decided; and it is to this that I wish, at present, to direct your Lordship's attention. It is evident that should England be at war with any nation possessing a naval force of any strength, these Colonies would hold out inducements to attack which should not be overlooked; for, not only is the trade carried on enormous, but the wealth concentrated in the principal towns is very great; it is therefore but reasonable to suppose that an enemy would not neglect to avail himself of the opportunity offered to him of injuring the trade of these Colonies, or of appropriating the wealth concentrated in the principal towns, more especially when he must be aware that this trade is carried on to a great extent with English capital; and thus, much of the wealth is owned by persons resident in England. In fact, the connection between these Colonies and the Mother Country is of such a character, as to render any great injury to the Colony a matter of no trifling importance at Home; and it is therefore desirable that every due precaution should be taken to guard against such injury.

5. In my Minute I have pointed out the mode in which this can be done with a due regard to economy; but I would beg to submit to your Lordship that as the risks incurred by the Colony are due in great measure to its connection with the Mother Country, and as the losses which will be incurred, should any serious damage be done to the Town of Sydney or to the trade of New South Wales, would fall upon English merchants as well as upon the inhabitants of the Colony, the share taken by the Mother Country in the defence of the Colony should be in some measure commensurate with these risks and chance of loss. In my Minute your Lordship will see that I have calculated upon the presence of a regiment of the line, mustering not less than 600 bayonets; that I propose to embody a Company of Artillery whose strength should not be less than 100 men; and that I reckon upon the services of 300 Policemen, who, when properly trained, will be nearly as effective as Troops. The Legislative Council has voted a sum of £12,000 as the pay of a Company of Artillery, for the year 1856; and I consider the presence of such a number of properly trained Artillerymen as essential to the defence of the Harbour and City. It is hardly necessary, however, that I should point out to your Lordship, that much more dependence can be placed upon a detach-

ment

ment from a body the members of which have a high character to sustain, than upon an isolated company locally raised, the character of the officers and men of which could not be fairly ascertained till they were brought under fire. I wish, therefore, to press upon your Lordship most strongly the advisability of stationing a Company of the Royal Artillery at Sydney. I may remark, that as these men will be employed upon mere garrison duty, they might be looked upon as a veteran company, which might with great propriety be formed of old soldiers whom it would be impossible to employ in active service in the field. I am aware that at present the demand for men and officers occasioned by the war might make it difficult, if not impossible, to detach a company composed of young and active men; but a veteran company might be raised expressly for the duty, and there are many reasons, to which it is unnecessary that I should allude at present, which render it desirable that this body should be raised under the authority of Her Majesty's Government—not under that of the Colonial Government. Should, however, your Lordship be unable to accede to this proposal, or should any objection be raised on the part of the military authorities to the organization of such a company, then I would request that application should be made to the Ordnance, or to other competent authorities, to select two officers who may be able and willing to act, the one as Captain, the other as Senior Lieutenant of the local company. I should imagine that there would be many retired Officers of Artillery who would be willing to accept these appointments at the rate of pay voted by the Council—viz., £1 per diem to the Captain, and 15s. per diem to the Lieutenant—and who would be perfectly competent to perform the duties which would be entailed upon them. To these officers I would suggest authority should be given to enlist men to serve in this local company for a term of say seven years, at rates of pay not exceeding for Serjeants, 5s. per diem; Corporals, 4s.; Privates, 2s. 6d. I am aware that this pay will appear high in England, and that some objection may be made to the issue of pay so far in excess of that given to the non-commissioned officers and privates of Her Majesty's forces. Should, therefore, your Lordship think it advisable, the amount could be reduced, while the men were in England, to a rate something more in accordance with the usual pay of the Royal Artillery, while the additional pay might be made receivable upon the arrival of the men in the Colony; and thus the objections arising from the presence in the same barracks—for I hope it will be found possible to allow the officers and men to occupy quarters in some of the barracks near the port from which they are to embark, and that arrangements may be made to arm, clothe, and equip them fully in England, so that they may embark as a thoroughly organized military body, under proper officers, and subjected to a proper system of discipline. The sum required for the arms and equipments, and for the payment of the men for the period which may elapse between their enlistment and embarkation, will be transmitted to the Colonial Agent. The Land and Emigration Commissioners might, I would submit, be instructed to provide a passage for the officers and men of this company, together with their families, the charge to be defrayed out of the sum transmitted from the Colony for paying the passage of emigrants.

6. It is my intention to introduce, immediately, an Act analogous to the English Mutiny Act, giving to the authorities in the Colony power to punish offences against military discipline, and this Act will have been submitted to your Lordship long before the organization of the company can take place; but such an Act could not, of course, be operative in England, and there will be the difficulty of enforcing proper discipline among the men previous to their embarkation. This is a difficulty which arises out of the necessity in which I am placed of raising these men in England and not in the Colony, but this is a necessity which is entailed upon me by the state of the labour market here, and which is, in point of fact, unavoidable; but these and other difficulties may operate very prejudicially upon the success of a measure upon which the safety of this important City, and of its rapidly increasing trade, must in great measure depend; and in considering them I am the more fully impressed with the opinion, that the simplest, the safest, and the most economical course, both for the Mother Country and the Colony, would be, that a Company of the Royal Artillery should be sent to Sydney; and I trust that your Lordship will be disposed to adopt the views contained in the former part of this Despatch with relation to this subject, and that Her Majesty's Government will decide to station a Company at Sydney, even should it be considered necessary to charge the whole of the expense consequent upon such a step upon the Colonial Revenue.

I have, &c.,

W. DENISON.

THE RIGHT HONORABLE,  
LORD JOHN RUSSELL,  
&c.,                      &c.,                      &c.

No. 41.

THE SECRETARY OF STATE FOR THE COLONIES to GOVERNOR SIR W. DENISON.

*Downing-street,*

22 March, 1856.

SIR,

I have to acknowledge the receipt of your Despatch No. 137, of the 8th of 23 March, 1856. September, reporting the measures in progress for the Defence of the Harbour and City of Sydney, and requesting that a Company of Royal Artillery may be sent out from this country; and I now transmit to you the copy of a letter from one of the Under Secretaries of State for War.

2. Preparations are in progress for carrying the proposed arrangement into effect, on the distinct understanding that full provision will be made by the Colonial Legislature for defraying the whole of the expenses connected with the pay, maintenance, and transport of these Troops.

I have, &amp;c.,

H. LABOUCHERE.

GOVERNOR SIR W. DENISON,

&amp;c., &amp;c., &amp;c.

[Enclosure.]

*War Department,*

8 March, 1856.

SIR,

I have laid before Lord Panmure your letter of the 30th January last, with its enclosures from the Governor of New South Wales, relating to the Defences of Sydney, and requesting that a Company of Royal Artillery may be sent to the Colony, to assist in manning the Batteries which are now in progress.

2. I am to request that you will acquaint Mr. Secretary Labouchere in reply, that it is gratifying to Lord Panmure to learn, on reference to the Field Marshal Commanding in Chief, that a Company of Royal Artillery, composed of 100 gunners and drivers, with the proper proportion of commissioned and non-commissioned officers, can be spared for service in New South Wales. Lord Panmure collects, from the Governor's Despatch, that provision will freely be made by the Colonial Legislature for defraying the whole of the expenses connected with the pay, maintenance, and transport of this reinforcement of the Troops stationed in the Colony, and, on this understanding, His Lordship only awaits the signification of Mr. Labouchere's wishes to that effect, to direct the immediate embarkation of this Company of Royal Artillery for Sydney accordingly.

3. With respect to the hope expressed by Sir William Denison, that the Guns required for the proposed fortifications at Sydney may arrive early in the course of the present year, Lord Panmure regrets to learn, on inquiry, that owing to the pressure arising from the urgent services of the War, some time must yet elapse before the platforms and carriages for these guns can be completed; he has, however, enjoined the utmost expedition to be used in preparing them, and trusts to the whole being ready for shipment within three months from the present date.

I am, &amp;c.,

G. C. MUNDY.

H. Merivale, Esq.,

&amp;c., &amp;c., &amp;c.

No. 78.

THE SECRETARY OF STATE FOR THE COLONIES to GOVERNOR SIR W. DENISON.

*Downing Street,*

20 June, 1856.

SIR,

M 266  
B.  
16 June, 1856. With reference to my Despatch No. 41, of the 22nd of March, respecting the preparations then in progress for sending out a Company of Royal Artillery and their families to Sydney, I transmit, for your information, the copy of a letter from the Emigration Commissioners, reporting that the ship "Nimroud" has been chartered for this service, and that she will be ready for the reception of the Troops on the 30th of the present month.

I have, &amp;c.,

H. LABOUCHERE.

GOVERNOR SIR W. DENISON,

&amp;c., &amp;c., &amp;c.

[Enclosure.]

[Enclosure.]

Emigration Office,  
16 June, 1856.

SIR,

With reference to your letter of the 2nd ultimo, directing us to provide tonnage for the conveyance to Sydney, at the expense of the Colony of New South Wales, of a Company of Artillery and their families, we have the honor to report, for the information of Mr. Secretary Labouchere, that we have accordingly chartered the ship "Nimroud," of 1022 tons, for this service.

2. The vessel is now in course of fitting, and will be lying alongside the New Pier, at the Royal Arsenal, Woolwich, ready in all respects for the reception of the Troops on Monday, the 30th instant.

3. We have been in communication with the Military Authorities at Woolwich, and the Commanding Officer of the Company, on this subject, and have informed them that the ship will be ready to receive her passengers at the time and place above named.

4. We took up this ship, as usual, by public tender, at the rate of £16 18s. 9d. per statute adult for the non-commissioned officers and men, with their families, and £75 each for the six officers, with separate cabins, and provisions included.

We have, &amp;c.,

T. W. C. MURDOCH.

C. ALEXANDER WOOD.

Herman Merivale, Esq.,  
&c., &c., &c.

## COLONEL BARNEY'S REPORTS AND ESTIMATES OF WORKS.

Engineer's Office,  
Sydney, 27 June, 1856.

SIR,

I have the honor to submit herewith an Estimate for certain additions, which I consider advisable, to render the Works of Defence in the vicinity of the City more effective.

The Estimate amounts to £12,113 8s. 11d. The additions proposed are as follows:—

1st. Ditch and palisade at Dawes' Battery.

2nd. Ditch and palisade at Macquarie Point, with an extension of the work to receive three guns.

3rd. An extension of the work at Pinchgut Island, to receive three guns.

4th. An addition to the work at Fort Macquarie, to receive five guns.

The Estimate is in detail, and the report side states the nature of the work proposed to be effected. It seems, therefore, to be only necessary for me to give my reasons for proposing the works.

With reference to Dawes' Battery, a ditch and palisade seem necessary, as well for the security of the work from assault, as for its protection from trespassers, from whom it now receives considerable damage.

With respect to Macquarie Point, in carrying out the work authorized for the current year, I found that space could be had for three additional guns, opening a direct fire upon the sea approach. The proposed work is now provided for.

I think this addition of much importance.

With reference to Fort Macquarie, I propose an additional work to cover five guns. The same remarks as those on Macquarie Point apply in this case.

At Pinchgut, I find that, in the prosecution of the authorized work, a sufficient extent of land has been made to admit of a most important addition to the work; there is space for two guns on its southern extremity, with a direct fire on the approach, and also space for one gun on the northern extremity, masked by the Tower, until a vessel attempts to run past the work.

I look upon the additional works now submitted for consideration as adding most materially to the efficiency of the batteries constructed for the immediate defence of the City, and strongly urge their approval.

Accompanying are plans shewing the contemplated works.

I beg now to state, that the works authorized for the current year are progressing most satisfactorily.

Dawes' Battery is complete, with the exception of the platforms, which are, however, in progress.

Macquarie Point Battery is ready for guns.

Pinchgut may be considered as about two-thirds completed, the workmanship is excellent, and I think the work has now assumed a character worthy of a better name than Pinchgut.

Fort Macquarie has been fully armed.

No progress has been made at Kirribilli Point, in consequence of the purchase of the land required not having been yet arranged.

Tenders for the work have been called for and approved.

Plans and specifications for the authorized buildings to be constructed at Dawes' Point and Macquarie Point, and tenders for the work, are about to be called for.

I now beg to draw attention to the question, whether the defences at Middle Head, South Head, and Bradley's Head, should be proceeded with? At the two former points, the work already done is of a permanent character. At Bradley's Head, which is also a permanent work, additional cover for one gun is required, as well as a keep and magazine.

I beg likewise to draw attention to the advisability of procuring more ordnance from England. The demand under promise to be sent out by the Home Government (50 guns) will be absorbed by the batteries now completed or in progress, without leaving a single gun to arm other points which, under circumstances, might be required.

I think the demand should embrace fifty guns, with carriages and equipments; say 20 56-pounder shell guns, and 30 32-pounder guns.

I have, &c.,

GEO. BARNEY,

Lt.-Col.

The Honorable

The Colonial Secretary.

&c.,

&c.,

&c.

*REPORT and Estimate of Works proposed to be done by the Colonial Government for the Defences of Port Jackson, in the year 1857, amounting to £12,113 18s. 10d.*

ABSTRACT.

DAWES' BATTERY.

- 1.—Excavating a ditch, 15 feet wide and 5 feet deep, on the northern and eastern faces, and enclosing the Work with a picket fence, to prevent trespass, a course found necessary for the preservation of the Work, constructing an underground drain to complete the drainage of the Battery, and constructing a gateway leading to the Battery and Barracks ... .. 1,044 6 2

BATTERY ON MRS. MACQUARIE'S POINT.

- 2.—Extending the present Work on the north-west side, for mounting 3 additional guns, 2 in Embrasures, and 1 en Barbette, bearing directly on the Ship Channel, providing pivots and races, and traversing platforms for three heavy guns. Excavating a ditch, 15 wide and 5 feet deep, in front, and enclosing the whole Work with a picket fence, 6 feet high, with barrier gates for entrance to Battery ... .. 2,162 17 3

PINCHGUT ISLAND BATTERY.

- 3.—Extending the present Work, on south-east side, for mounting 2 heavy guns, 1 in Embrasure, bearing directly on the Ship Channel, and 1 en Barbette in a circular Bastion, to traverse the whole circle; also constructing a parapet at the north-west angle, to form cover for 1 heavy gun to traverse a circle of 100 degrees, providing pivots and races for 3, and traversing platforms for 5 heavy guns 3,848 9 2
- 4.—Provision for mounting the several Batteries, when completed, with, say, 50 guns. Painting the Carriages and Anti-corrosioning Guns, &c. Labour and Materials ... .. 200 0 0
- 5.—Provision for six sentry boxes, to be distributed on the Works as circumstances may require. ... .. 90 0 0
- 6.—Provision for two Military men to be employed as Boatmen, for 1 year. Repairs and painting to boats ... .. 69 7 8
- 7.—Provision for Coals for office fire, Stationery, and other articles for office use ... .. 10 1 3

FORT MACQUARIE.

- 8.—Provision for a new Wing in extension of the eastern face of old work, for mounting 5 guns in embrasures ... .. 4,688 17 5

£12,113 18 11

GEO. BARNEY, Lt. Colonel.

27 June, 1856.

REPORT.

1.—DAWES' BATTERY.

This item provides for excavating a ditch 15 feet wide and 5 feet deep, on the northern and eastern faces, and enclosing the work (as shewn in red dotted lines on plan,) with a picket fence 6 feet high to prevent trespass; this course has been found necessary, to prevent the works from being injured by persons running over and destroying the slopes and parapet.

Constructing an underground drain for carrying the water off from the slope of the upper battery. Forming a gateway, from George-street, leading to lower battery and barracks.

*Earthwork Ditch.*—Excavating earth down to the rock, and in the rock to the depth of 5 feet; and removing and depositing the rubbish to form the glacis of the battery, sodding the outer and inner slopes of ditch with sods laid flatwise, and secured with wooden pegs.

*Road*

*Road.*—Excavating in earth, spreading and levelling ditto in forming roadway 12 feet wide leading to battery and barracks.

*Mason.*—Gate pier 9 feet high, 2 ft. 3 in. by 2 ft. 3 in. of masonry with draft and picked faces, surmounted by a cut stone cap to correspond with one existing; lotting in and leading hooks for hinges, &c. *Drain.*—Channelling in rock 18 inches deep, forming drain and covering ditto with rough flagging 6 inches thick laid in mortar, sink stones 2 ft. 6 in. by 2 ft. 6 in., sunk with wrought iron gratings let in and run with lead.

*Carpenter.*—Fence to be constructed of cleft hardwood, picket palings 3 in. by 3 in., 6 feet high above ground, to be sunk into ground 2 feet, and pickets to be each secured with 2 5-inch spikes, and the tops to be pointed with the axe; rails to be 6 in. by 6 in. hardwood, cut arriswise, and to be halved together at the joint; barrier gates to be framed (according to plan) of hardwood 3 in. thick, and to be filled in with yellow deal pickets, cut arriswise, but not wrought; the tops to be cut to correspond with the fence; the gates to be hung with strong hook and eye hinges fixed with  $\frac{3}{4}$ th screw bolts and nuts, and fastened with strong iron swivel bar and padlock, and rough bolt; gate posts to be of unwrought round hardwood, 12 in. diameter, sunk 3 ft. 6 in. into ground; the fence and gates to be tarred two coats with coal tar.

## 2.—BATTERY AT MRS. MACQUARIE'S POINT.

This item provides for extending the present work on the north-west side, at an angle bearing directly on the ship channel, in the right approach to Sydney, for mounting 3 additional guns. Providing traversing platforms, pivots, and races, &c., for 3 guns; excavating a ditch, and constructing a picket fence with barrier gates, &c., for enclosing the work same as Dawes' Battery.

*Earthwork.*—North-west end, excavating earth down to the rock, and in the rock to the level of terreplein, wheeling the rubbish and filling in, and forming parapets and slopes, according to plan, two embrasures to be cut through parapet, all the slopes to be sodded to correspond with existing portion of battery. Ditch to be excavated and finished same as that proposed for Dawes' Battery.

*Mason.*—Foundations for revetments to be of rubble masonry laid in mortar, 2 feet thick; revetments to be of masonry, 2 feet thick, with draft and picked faces, to be laid in parallel courses to correspond with the existing work; embrasures to be formed according to plan, the sills and sides of which are not to be less than 3 feet wide on the bed, the openings to be chiseled all round, and the perpendicular angles rounded. Semi-circular bastion at north-west end, to be built of heavy ashlar masonry, 10 feet thick at bottom, diminishing to 8 feet at top, the outer face to be rough pitched, or rock face, the inner face to correspond with the adjoining work, the upper surface to be sloped, as directed, and finished in chiseled work, the inner circle to be filled in with rubble masonry up to the height of the underside of the flagging, which is to be 8 in. thick laid in mortar; gun pivots to be let into stone blocks, 4 feet by 4 feet, and leaded; gun races to be sunk flush into flagging and leaded; Banquette, 1 ft. 6 in. wide and 1 ft. 4 in. high, to be of ashlar masonry, chiseled on exposed surfaces, and set in mortar; the terreplein to be paved, 16 feet from front, with 8 in. chiselled flagging laid in mortar; drains, 9 in. by 9 in., to be formed of masonry covered with flagging laid in mortar, surface drain to be cut in flagging, 5 in. wide, along the front of Banquette, this drain to be connected with the underground drains, and iron gratings to be fixed at the junctions.

*Carpenter.*—Traversing platforms to be constructed, complete, according to established Pattern. Fence and barrier gates to be constructed for enclosing the work, same as that for Dawes' Battery.

*Smith.*—Providing pivots and races, as plan, ironwork for traversing platforms, and hinges and bars for gates, gratings, &c.

## 3.—PINCHGUT ISLAND BATTERY.

This item provides for extending the present work on south-east side for mounting 2 heavy guns, 1 in. embrasure and 1 en Barbette, in a semi-circular bastion, to traverse the whole circle, also constructing a parapet at the north-west angle to form cover for 1 heavy gun to traverse a circle of 100 degrees, providing pivots and races for 3, and traversing platforms for 5 guns.

*Excavator.*—Clear away rubbish for foundation of walls, and level rock for footings, wheeling rubbish for filling in between walls of battery to the proper level of terreplein, cutting down portion of the present parapet at south end, and dressing according to plan.

*Mason.*—Front and end walls to be of heavy ashlar masonry, 12 feet thick at bottom and 9 feet at top, the headers not to be less than 4 ft. 6 in. long, nor the stretchers less than 2 ft. 6 in. on bed, the core to be filled in with rubble masonry, grouted with hot lime, the outer face to be pitched or rough rock work, the insides of the parapets to be picked work, the upper slope and embrasure to be wrought in chiseled work, the back wall to be of ashlar masonry, 5 feet thick at bottom and 4 feet at top, with pitched face to correspond with wall of barrack, the walls to be properly bonded into the old work; this wall to be carried up to form a parapet 4 ft. 6 in. high above the terreplein, the top to be sloped outwards and finished in chiseled work; Banquette of ashlar masonry, 1 ft. 6 in. wide and 1 ft. 4 in. high, to be fixed round parapet to correspond with that at present fixed; gun pivots to be sunk into stone blocks 4 ft. by 4 ft., and run with lead; gun races to be let into flagging or curbs, flush and run with lead; the circle at south end to be paved with 8 in. flagging laid in mortar; surface drain to be of ashlar masonry, 2 ft. 6 in. wide and 9 in. deep, with radiated joints, properly sunk and set in mortar.

*Carpenter.*—Traversing platforms to be constructed, according to established pattern.

*Smith.*—Gun pivots, of cast iron, to be made according to the established pattern, and gun races of 4 in. by  $\frac{3}{4}$  in. wrought iron, as per plan.

4.—This item provides for mounting the several batteries when completed, and painting the carriages (4 coats) of 50 guns, and anti-corrosioning guns 2 coats.

5.—This item provides for six sentry boxes, to be built according to plans and specification, approved by the Board of Ordnance, per order dated 14 April, 1850, J.G.F. to be distributed on the several works as circumstances may require.

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6.—This item provides for two military men to be employed as boatmen for one year, together with repairs and painting to boats.

7.—This item provides for coals for one office fire, stationery and other articles for office use.

#### 4—FORT MACQUARIE.

This item provides for constructing a new wing in extension of the eastern face of the present work, for mounting 5 guns in embrasures; this addition is intended to occupy a prominent position, commanding, in a direct line, the ship channel, in the right approach to Sydney Cove; provision is, therefore, made as follows:—

For pulling down that portion of the retaining wall southward of the south-east octagon tower to the level of the rock, using up the old materials in re-building new walls. Excavating ground to the proper level of terreplein; the rubbish so dug out to be used for filling in between walls. Filling in the ground about battery to the required level with earth or rubbish brought from a distance. Building walls according to plan, the front wall to be 10 ft. 6 in. at base, diminishing to 9 ft. at top, of heavy ashlar masonry; the core to be built of rubble, grouted with hot lime; the south end and back walls to be 4 ft. 6 in. at base, diminishing to 3 feet at top; the outer walls to terminate with a cordon 12 in. deep, and string course 6 in. deep, to correspond with adjoining work. Parapets to be constructed of heavy ashlar masonry, that in front to be 9 feet thick and 6 ft. 6 in. high, pierced with embrasures for 5 guns; south end and back parapets to be 3 feet thick and 5 ft. 10 in. high. Banquette 2 feet high 1 ft. 6 in. wide to be fixed round all parapets, leaving space only for the guns; steps for ascending banquette 12 in. wide and 12 in. high. Retaining walls at north-west end, and for steps, to be 18 in. thick, finished at top with weathered stone coping; coping to be taken from an old wall to be pulled down. Steps leading to battery to be 9 feet wide with 11-inch treads, 7-inch risers set in mortar; rear of battery to be sloped in earth to an angle of 45 degrees, and covered with sods, laid flat and pegged. Drain for carrying off the surface water to be constructed of 3 ashlar, with radiated joints, with sunk channel 12 in. wide 3 in. deep; iron grating 12 in. by 12 in. of  $\frac{5}{8}$ th wrought iron to be let in, and run with lead, in connection with underground drain, to be constructed of masonry in mortar, 12 in. deep and 9 in. wide, top and bottom to be of rough flagging laid in mortar. Platforms for guns to be laid with 8-inch granite paving, laid in mortar; the spaces between the guns to be paved to the width of 16 feet from the front, with 6-inch chiseled sandstone flagging laid in mortar. Space in front of battery as shewn in plan, to be enclosed with a picket fence 6 feet high, and barrier gates; pickets to be cleft hardwood averaging 3 in. by 3 in., pointed at top with the axe, and sunk in the ground 2 feet, and fixed with two (to each) 6-inch spike nails to rails of 6 in. by 6 in. hardwood cut arriswise and halved at the joints; spurs, 5 in. by 4 in. hardwood, to be fixed into ground 10 feet apart, and notched to fit, and securely fixed into bottom rail. Gate-posts to be hardwood, 10 in. by 10 in., sunk 3 ft. 6 in. into ground, spurs to gate to be 6 in. by 6 in., cut raking to fit posts. Gates to be 3 inch barrier framed with hardwood, 5 in. by 3 in. stiles, 8 in. by 1 $\frac{1}{2}$  inch rails, and 5 in. by 1 $\frac{1}{2}$  inch braces, filled in with angular deal pickets of 3 $\frac{1}{2}$  inch stuff, cut arriswise and pointed at the top. Hinges for gates to be strong home made, with all necessary hooks, eyes, and bolts for fixing. Swivel bar for fastening to be constructed to swing on a pin in the centre, with knuckle hasp slotted for padlock; this bar, with the plates, &c., connected therewith, to be fixed with strong screws. The barrier gates, posts, and picket fence to be tarred two coats with coal tar.

### ESTIMATE.

#### I.—DAWES BATTERY.

	£	s.	d.	£	s.	d.
680 5-27 yds. cube excavating in earth, at 4s. ...	...	...	...	136	0	8
1,110 15-27 yds. cube excavating in rock, at 9s. ...	...	...	...	499	15	0
330 feet channeling in rock, at 2s. 6d. ...	...	...	...	41	5	0
3 6-25 rods axed masonry, at 52s. 6d. ...	...	...	...	8	10	1
92 feet chiseled work, at 1s. 3d. ...	...	...	...	5	15	0
5 feet sunk work, at 1s. 9d. ...	...	...	...	0	8	9
330 feet forming drains in rock, at 3s. 6d. ...	...	...	...	57	15	0
31 3-12 feet 6-inch chiseled flagging and laying, at 3s. 9d. ...	...	...	...	5	17	2
5 letting in and leading gratings, at 2s. ...	...	...	...	0	10	0
1,002 yds. suppl. sodwork laid flatwise, at 1s. 2d. ...	...	...	...	58	9	0
80-112 cwt. cast iron gratings, at 23s. 4d. ...	...	...	...	0	16	8
208 lbs. wrought iron hinges, at 8d. ...	...	...	...	6	18	8
2 3 $\frac{1}{2}$ -inch strong padlocks, at 2s. ...	...	...	...	0	4	0
Amount carried forward ... ..	£822	0	0			

Amount



## DEFENCES OF PORT JACKSON.

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Amount brought forward	...	822	5	0
300 lbs. 5-inch spike nails, at 6d.	...	7	10	0
501 feet picket fencing (labour only), at 1s. 9d.	...	43	16	9
94 feet 3-inch barrier gates and hanging, at 2s. 6d.	...	11	15	0
62 feet rough hardwood gate-posts, at 2s.	...	6	4	0
1,000 hardwood cleft palings, at 50s. per 100	...	25	0	0
1,300 hardwood railings cut arriswise, at 30s. per 100...	...	19	10	0
800 yds. suppl. tarring, two coats, at 4d.	...	13	6	8
		949	7	5
Contingencies, one-tenth...	...	94	18	9
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		1,044	6	2

## 2.—BATTERY ON MRS. MACQUARIE'S POINT.

140 7-27 yds. cube excavating in earth, at 4s. 6d.	...	31	11	2
465 yds. cube excavating in rock, at 9s...	...	209	5	0
230 feet channelling in rock, at 2s. 6d. ....	...	28	15	0
18-25 rods taking down old masonry, at 10s.	...	0	7	2
88 20-25 rods masonry in foundations, at 35s.	...	155	8	0
30 8-25 rods axed masonry, at 52s. 6d. ....	...	79	11	9
226 6-25 rods ditto circular on plan, at 65s.	...	735	5	7
456½ feet draft and picked work, straight, at 1s.	...	22	16	6
112½ feet do. do. circular, at 1s. 3d.	...	7	0	7
302 feet plain chiseled work, at 1s. 3d. ....	...	18	17	6
20 feet forming drains in rock, at 3s. 6d.	...	3	10	0
42 8-12 feet forming stair steps, at 4s. ....	...	8	10	6
64 feet stone in blocks, at 3s. ....	...	9	12	0
1,040 feet 8-inch chiseled flagging and laying, at 3s. 9d.	...	195	0	0
2,052 inches letting in gun races, at 4d. ....	...	34	4	0
90 inches letting in gun pivots, at 3s. 4d.	...	15	0	0
312½ feet levelling for footings, at 1s. ....	...	15	12	6
226 6-9 yds. suppl. forming and levelling roadway, at 3s.	...	34	0	0
508 3-9 yds. suppl. sodwork laid flatwise, at 1s. 2d.	...	29	13	0
41 2-9 yds. suppl. sodwork laid edgeways, at 6s. ....	...	12	7	4
70 feet 3-inch barrier gates, at 2s. 6d. ....	...	8	15	0
525 feet fencing with rough pickets (labour only), at 1s. 9d.	...	45	18	9
1,000 hardwood cleft pickets, at 50s. per 100	...	25	0	0
1,200 hardwood railings cut arriswise, at 30s. per 100...	...	18	0	0
40 feet rough hardwood gate-posts, at 2s.	...	4	0	0
350 yds. suppl. tarring fence, two coats, at 4d.	...	5	16	8
300 lbs. spike nails, at 6d.	...	7	10	0
32½ cwt. cast iron gun pivots, at 18s.	...	29	0	6
96 lbs. wrought iron hinges, at 8d.	...	3	4	0
14½ cwt. wrought iron gun races, at 50s.	...	36	5	0
		1,829	17	6
Contingencies, one-tenth...	...	182	19	9
3 Platforms, at £50	...	150	0	0
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		2,162	17	3

## 3.—PINCHGUT ISLAND BATTERY.

451 7-27 yds. cube filling in battery with earth, at 2s. 3d.	...	50	15	4
109 20-27 yds. cube excavating in rock, at 10s.	...	54	17	4
489 feet channelling in rock, at 2s. 6d. ....	...	61	2	6
1,234 feet levelling rock for footings, at 1s. 6d.	...	92	11	0
3 rods axed masonry, at 75s.	...	11	5	0
90 rods axed masonry with rock face, at 70s.	...	315	0	0
267 9-12 feet axed masonry for gun races, at 6s.	...	80	6	6
711 14-25 rods axed masonry in walls 10 feet thick, at 60s.	...	2,134	13	7
845 feet draft and picked work (straight), at 1s. 9d.	...	73	18	9
186 8-12 feet ditto (circular), at 2s. 3d.	...	21	0	0
1411 feet plain chiseled work (straight), at 2s. ....	...	141	2	0
112 feet stone in blocks, at 3s. 9d.	...	21	0	0
329 feet 8-inch chiseled flagging and laying, at 3s.	...	49	7	0
2,052 inches letting in gun races, at 7d.	...	59	17	0
90 inches letting in gun pivots, at 4s. 3d.	...	19	2	6
60 feet sunk stone surface drain, 2 ft. 6 in. wide, 9 in. deep, at 7s.	...	21	0	0
31 32-112 cwt. cast iron gun pivots, at 18s.	...	28	3	1
14½ cwt. wrought iron gun races, at 50s.	...	36	5	0
		3,271	6	7
Contingencies, one-tenth...	...	327	2	7
5 traversing platforms, at £50	...	250	0	0
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		3,848	9	2
Amount carried forward	...	7,055	12	7

## DEFENCES OF PORT JACKSON.

	Amount brought forward	...	...	...	7,055	12	7
4.—	50 landing guns from ship, conveying them to their respective works, painting carriages (4 coats), mounting and anti-corrosioning guns, and lacquering their bores, at £4	...	...	...	200	0	0
5.—	6 sentry boxes, of established pattern, at £15	...	...	...	90	0	0
6.—	Boatmen :—						
	313 days, corporal in charge, at 2s. per diem	...	...	...	31	6	0
	313 days, private, at 1s. 8d. per diem	...	...	...	26	1	8
	Incidental repairs to boats	...	...	...	12	0	0
					69	7	8
7.—	1½ tons coals, at 35s.	...	...	...	3	1	3
	Stationery and sundries for office use	...	...	...	7	0	0
					10	1	3
8.—FORT MACQUARIE.							
353	yds. cube excavating in earth, at 4s. 6d.	...	...	...	79	8	6
454	rods taking down old masonry, at 10s.	...	...	...	227	0	0
608	yds. cube filling in with rubbish inside battery, at 4s. 6d.	...	...	...	136	16	0
552½	rods masonry in walls, at 62s. 6d.	...	...	...	1,725	15	7
422½	rods ashlar masonry, at 65s.	...	...	...	1,372	6	3
1,923	feet chiseled work on parapet (straight), at 1s. 3d.	...	...	...	120	3	9
268	feet chiseled work (circular), at 1s. 6d.	...	...	...	20	2	0
533	feet cube stone in blocks, at 3s.	...	...	...	79	19	0
50	feet running re-setting old corden stones, at 2s.	...	...	...	10	0	0
65	feet ditto ditto blocking course, at 1s.	...	...	...	3	5	0
175	feet stair steps, at 4s.	...	...	...	35	0	0
960	feet 8-inch granite flagging and laying, at 5s.	...	...	...	240	0	0
672	feet 6-inch chiseled sandstone and laying, at 3s.	...	...	...	100	16	0
102	feet surface drain, of masonry, at 7s.	...	...	...	35	14	0
1	fixing grating and running with lead, at 4s.	...	...	...	0	4	0
15	feet drain 12 in. deep and 9 in. wide, at 3s. 6d.	...	...	...	2	12	6
80	yds. cube sodwork laid flatwise, at 1s. 2d.	...	...	...	4	13	4
450	feet railing cut arriswise, at 30s. <sup>per</sup> 100 feet	...	...	...	6	15	0
350	feet pickets, rough cleft hardwood, at 50s. <sup>per</sup> 100 feet	...	...	...	8	15	0
300	feet suppl. hardwood, at 30s. <sup>per</sup> 100 feet	...	...	...	4	10	0
70	ditto 3-inch barrier gates, at 2s. 6d.	...	...	...	8	15	0
130	ditto picket fence (labour only), at 1s.	...	...	...	6	10	0
30	lbs. wrought iron gratings, at 6d.	...	...	...	0	15	0
152	lbs. wrought iron home-made hinges, at 8d.	...	...	...	5	1	4
150	lbs. 6-inch spike nails, at 6d.	...	...	...	3	15	0
1	3-inch strong patent padlock, at 2s.	...	...	...	0	2	0
234	yds. cube tarring fence, 2 coats coal tar, at 4d.	...	...	...	3	18	0
5	guns, mounting guns, at £4	...	...	...	20	0	0
					4,262	12	3
	Contingencies, one-tenth...	...	...	...	426	5	2
					4,688	17	5
	TOTAL	...	...	...	£12,113	18	11
WILLIAM COLES, Superintendent.							

[Minute 13,633.]

THE question of the defence of Port Jackson and of the City of Sydney was considered by the Executive Council in 1855, with reference to Minutes submitted by me, recommending the construction of certain works, and embodying with that recommendation specific propositions with regard to the mode in which the force, both Naval and Military, required for the efficient action of the works above mentioned in the defence of the City, should be raised.

These views were adopted generally by the Legislative Council, and a sum of £12,000 was voted for the pay of a Company of Artillery. An increase of 50 men to the Police of the City was also sanctioned, under the understanding that the whole of the Police Force was to be drilled and made effective as Artillerymen.

These arrangements were intended to be subsidiary only; and the presence of a Regiment of the Line was calculated on, the effective number of which should not be less than 600 bayonets.

The Naval arrangements contemplated the presence of a Ship-of-War, and the employment of one or two Gun Boats, one of which at least should be propelled by steam.

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The construction of the Batteries being now in a state of great forwardness, and it being probable that the guns for arming them will speedily arrive, it is evidently a matter of imperative necessity that the mode in which these Batteries are to be manned should be decided on without delay; and I am the more anxious with regard to this, as the prospect of a war with America does not appear to be so remote as I could wish.

I may observe, in the first place, that it has not been possible to increase the Police Force to the extent required, partly owing to the demand for labour, which has prevented the enlistment of men, and partly to the falling off of the Revenue, which made it desirable to lessen as much possible the expenditure of the Government.

In the second place, I would wish to call your attention to the fact, that the Naval arrangements, having been based upon the supposition that Her Majesty's Government would be disposed to transfer to the Colony the armed Steamer the "Torch," have been rendered incomplete by the refusal of the Lords Commissioners of the Admiralty to transfer this vessel for a less sum than £5,000. No provision having been made by the Legislative Council for such an outlay, it was not thought desirable, under the then state of the finances, to incur such a charge; and the only vessel at the disposal of the Government is the small Gun Boat the "Spitfire," which has not been armed, and which has been employed principally in conveying stores and provisions to the Light Houses on the coast.

The Despatch laid before you will explain the steps which have been taken with regard to the formation of a Company of Artillery. Time has not been given for a reply to this Despatch; but I have heard, through private channels, that a Company of Artillery may possibly be sent to the Colony.

The subject, then, to which I wish to draw your attention, is the absolute necessity which exists for the establishment and maintenance of some permanent Military Force, adequate to the defence of the harbour and City against the predatory attacks which may possibly be made upon the shipping or the Town itself. The points to be determined are:—

- 1st. The amount of the Force.
- 2nd. The expense of maintaining such a Force, and the mode in which such expense should be distributed between the Mother Country and the Colony.

The amount of the Force which will be required to guarantee the Colony against insult must be measured by the character and extent of the works erected at present, with the Batteries at Dawes' Point, Fort Macquarie, Kirribilly Point, Macquarie Point, and Pinchgut Island, which mount altogether from fifty to sixty guns of heavy calibre. It would not be safe to maintain a smaller force, even in times of peace, than one Company of Artillery, mustering from 100 to 120 men, and one Regiment of the Line, mustering 600 bayonets. In times of war it would be necessary to increase this force; and I still think that it would be most advisable to give to the whole of the Sydney Police such an organization as would fit them to act as Artillerymen: a small extra payment might be given to them on condition of their performing the duty. This would place at the disposal of the Government from 200 to 300 active, able, and intelligent men, at a comparatively small cost. Should this scheme present difficulties which cannot under present circumstances be overcome, it would then be advisable to organize a second Company of Artillery.

With regard to the cost of maintaining this force, I wish to bring under the notice of the Executive Council a portion of my Despatch to the Secretary of State on the subject of the defence of the Colony, where I have expressed an opinion that the Mother Country has a direct interest in supporting the Colonists against foreign aggression, and that she is in fact called upon to give aid and assistance in those cases in which the attack upon the Colony is caused by its relationship to the Mother Country. In all cases hitherto (and it must necessarily be the same for many years to come), the cause of war between England and any of the Nations who have had it in their power to act injuriously against these Colonies, has arisen not out of any matters in which the Colonies are concerned, but out of questions having exclusive reference to Imperial interests. I cannot, therefore, in any way assent to the justice of the decision which throws upon the Colonies the cost of maintaining the troops which are necessary for their defence against external aggression. I quite admit that, should the peculiar condition of society in any Colony make it advisable that the civil force at the disposal of the Government should be sustained by a well disciplined military body, the cost of maintaining such

such a force ought to be defrayed from Colonial Funds. But this is not the case in New South Wales; our population is quiet and obedient to the Laws; but our open harbour, and the position of the City of Sydney, rendering it liable to attack at any instant from the sea, make it a matter of necessity that military force should always be present.

Under these circumstances, I wish to submit to the Council, whether it would not be advisable to propose to Her Majesty's Government the adoption of a principle analogous to that which has already been sanctioned with reference to the cost of Steam Postal Communication, namely, that in matters in which the Mother Country and the Colony have a joint interest, the cost should be shared equally by the Imperial and Colonial Governments. With regard to the question at present under consideration, the general principle will require limitations in its application; and I should propose the following as a fair and equitable division of the expenses contingent upon the defence of the Colony against foreign aggression.

1st. That all permanent works and buildings, such as batteries, barracks, magazines, and stores, should be constructed and maintained at the cost of the Colony; such buildings, &c., as are now in existence to be transferred to the Colonial Government, under the distinct understanding that either these buildings, or others equally adapted to the purposes which they are called upon to fulfil, shall be maintained at the expense of the Colony.

2nd. That the Colony shall be chargeable with half the cost of the pay and allowances of such numbers of Her Majesty's forces as may, in the opinion of the Government and the Legislature, be required to defend the Colony against foreign aggression.

3rd. That, should the circumstances of the Colony be such as to render it advisable to issue to the Naval and Military Forces of Her Majesty doing duty in the Colony any addition to their pay, such addition should be chargeable upon the Colonial Revenue.

Rule 2 will apply, of course, to the Officers and Crews of such of Her Majesty's Vessels as may be specially employed for the defence of the Colony, the number and force of these Vessels being determined by the Government and the Legislature of the Colony; but it will not, of course, apply to the Vessels of War sent into these seas, in case of war, for the general protection of British trade and interests. The necessary storage accommodation for such Vessels will of course be cheerfully provided for by the Colony, and every assistance that can possibly be given to them will be afforded without hesitation; but the Colonial Government cannot be expected to become chargeable with any proportion of the pay of the officers and men on board ships, or with any of the expenses of the vessels themselves, which are employed in maintaining the general interests of the Empire. The advantages afforded to such vessels by the proximity, at all times, of friendly harbours are most important; and I cannot think that any contribution, in addition to this, can be called for until some general principle, applicable to all the Colonies interested, can be adopted.

It is unnecessary, however, at present, to do more than to allude to possible contingencies, so far as the Colony of New South Wales is concerned. The force which it will be necessary to maintain may be limited, at a maximum, to 2 Companies of Artillery, and to one Regiment of the Line, mustering 600 men. The cost to the Home Government of such a Regiment would probably amount to £21,000, exclusive of the charge for the rations of men and officers, and forage for a certain number of horses, also exclusive of the allowance of fuel, light, &c. If the cost of the soldier's ration be taken at 7d., and the deduction from the pay of each man be taken at 3½d., as the charge to the Government of the daily ration, and the number of rations being 682 daily, the cost of provisions would amount to between £3,600 and £3,700. Forage would cost, at present prices, about £1 per diem, or £365 per annum. The consumption of coals may be taken at        tons, which, at 37s, the contract price, would cost £        . There are also some other trifling expenses for candles, oil, &c, &c., which would make the total cost of a Regiment about £26,000 per annum, of which the Colony would pay one-half, or £13,000. I have not any precise data upon which to form a calculation as to the cost of a Company of Artillery; but in assuming it to be £2,500 per annum, I shall, I think, be rather over than under the mark; and the share of Imperial expenses, with which the Colonial Government would be chargeable for two Companies of Artillery, would be £2,500 per annum.

In these calculations I have not alluded to any Colonial Allowance which it may be necessary to grant to the soldiers, on account of the increased cost of the means of subsistence, and the high wages ruling in the Colony. This is a matter which must necessarily be  
subject

subject to annual revision. I may observe, however, that the services of the Military may be made available, under well considered regulations, for the construction of several works of both a Civil and Military character, as out of a force of 800 men it will be always possible to detach 100 men daily for work, without interfering in any way with the regular guards or other Military duties to be performed, by employing the men under their own Officers, in such a manner as to give them an interest in the work. The cost, as compared with that of executing the work by contract, will be much reduced; and an amount of labor which, after a time, may be considered as trained labor, will be at the disposal of the Government at a cheap rate.

I have not alluded to the organization of any Local Force, either as Militia or Volunteers, for under the present circumstances of the Colony I cannot imagine that the labor of so many men, as it would be necessary to raise, could well be spared; neither do I think that the defence of the town could be safely intrusted to any force not in a position to appear under arms at a moment's notice. Volunteers, however, might very properly be encouraged, as they would form very useful adjuncts to an organized Military force, should an attack be made upon the town, and ample employment would be found for Cavalry, Rifles, and Artillery, each in its proper capacity, when the hour of danger does arrive.

W. DENISON.

*PROCEEDINGS of the Executive Council, on the 23rd July, 1856, with respect to the Defences of Port Jackson.*

MINUTE No. 56-37. Confirmed 28th July, 1856.

His Excellency the Governor General lays before the Council a letter from Lieutenant Colonel Barney, Royal Engineers, submitting an Estimate of certain proposed additions which he considers it desirable to make to the Works of Defence in the vicinity of the City of Sydney, in order to make them more effective, the cost of which is estimated at £12,113 18s. 10d.

2. In connexion with this subject, the Council proceed to the consideration of the Governor General's memorandum on the general subject of the Defences of Port Jackson, which was circulated amongst the Members some weeks back.

3. The question of the Defence of Port Jackson, and of the City of Sydney, was brought under the attention of the Executive Council last year, in Minutes of the Governor General, in which the construction of certain Works of Defence was recommended, and specific propositions were submitted as to the mode in which the force, both Naval and Military, required for the efficient action of the Works in question, should be raised. These views were adopted generally by the late Legislative Council, and a sum was voted for the pay of a Company of Artillery. An increase of fifty men to the Police was also sanctioned, on the understanding that the whole of the Police Force in Sydney were to be drilled and made effective as Artillerymen.

4. These arrangements were subsidiary only; the presence of a Regiment of the Line was calculated upon, the effective number of which should not be less than 600 bayonets. The Naval arrangements contemplated the presence of a Ship of War, and the employment of one or two Gunboats, one of which, at least, should be propelled by steam.

5. The construction of the Batteries being now in a state of great forwardness, and it being probable that the guns for arming them will speedily arrive, it becomes a matter of urgent necessity to consider the mode in which these Batteries are to be manned.

6. In the first place it has not been possible to increase the Police Force to the extent required, partly owing to the demand for labor, which has prevented the enlistment of men, and partly to the falling off of the Revenue, which made it desirable to lessen, as much as possible, the Expenditure of the Government.

7. In the next place the attention of the Council is invited to the fact that the Naval arrangements, being based upon the supposition that Her Majesty's Government would be disposed to transfer to the Colony the Steamer "Torch," have been rendered incomplete, by the refusal of the Lords of the Admiralty to transfer this vessel to the Colony gratuitously, and no provision was made by the Legislature for her purchase; consequently the only vessel at the disposal of the Government is the Gunboat "Spitfire," which has not been armed, and which has been employed chiefly in conveying stores and provisions to the Light Houses on the Coast.

8. The steps taken with regard to an Artillery Force are set forth in a Despatch to the Secretary of State, a Copy of which is laid before the Council, by the Governor General, who explains that he has received intimation of the intention of Her Majesty's Government to send a Company of the Royal Artillery to this Colony.

9. The main subject to which the attention of the Council is now directed, is the absolute necessity which exists for the establishment and maintenance of some permanent Military Force, adequate to the defence of the Harbour and City against any predatory attack that may be made upon it. The amount of that force must be measured by the character and extent of the works erected, or in course of erection, which mount together from 50 to 60 guns of heavy calibre. It is not considered safe to maintain a smaller force even in times of peace than one company of Artillery, numbering from 100 to 120 men, and one regiment of the Line, mustering 600 bayonets. In time of war it would be necessary to increase this force, and His Excellency is of opinion that it would be advisable to give to the whole of the Sydney Police such an organization as would fit them to act as Artillerymen,—allowing them, on this account, a small addition to their pay.

10. With respect to the cost of maintaining this force, the Governor General lays before the Council the copy of a despatch to the Secretary of State, in which an opinion is expressed that the Mother Country has a direct interest in supporting the Colonists against Foreign aggression; and His Excellency submits to the Council, whether it would not be advisable to propose to Her Majesty's Government the adoption of a principle analogous to that already sanctioned with respect to the cost of Steam Postal communication, namely, that in matters in which the Mother Country and the Colony have a joint interest, the cost should be shared equally by the Imperial and Colonial Governments.

11. After due deliberation on this question, the Council adopt the following principles:—

(1.) That all permanent and necessary works and buildings,—such as batteries, barracks, magazines, and stores,—should be constructed and maintained at the cost of the Colony; such buildings of this character as are now in existence to be transferred to the Colonial Government, upon the understanding that either those buildings, or others equally adapted to the purpose for which they were intended, shall be maintained at the expense of the Colony.

(2.) That the Colony shall be chargeable with half the cost of the pay and allowances of such numbers of Her Majesty's Forces as may, in the opinion of the local Government and the Legislature, be required to defend the Colony against Foreign aggression.

(3.) That should the circumstances of the Colony be such as to render it advisable to issue to the Naval and Military Forces of Her Majesty doing duty in the Colony, any addition to their pay, such addition shall be chargeable on the Colonial Revenue.

12. The rule involved in the second of these propositions will apply to the officers and crews of such of Her Majesty's vessels as may be specially employed in the defence of the Colony, but not to vessels of war sent into these seas for the general protection of British interests.

13. The total cost of a regiment of the Line, numbering 600 men, is estimated at £26,000 per annum, of which, according to this arrangement, £13,000 would be borne by the Colony; and in like manner the Colony's share of the cost of maintaining, say two Companies of Artillery, may be taken at £2,500 per annum, irrespective in each case of any Colonial Allowance which may be authorized in consequence of the increased cost of living.

14. With respect to the proposed additions to the Works of Defence now in progress, the Council are not in a position to express an opinion, until they have before them plans of the works in question. But they recommend that the general scheme above detailed for the maintenance of a permanent force, and of military buildings, should be submitted for the consideration of the Parliament, and that the vote for increasing the Sydney Police be renewed. And they further advise that the Home Government should be moved to send out a Gun Boat, (to be propelled by steam,) one half the cost of maintaining which (but not the cost of construction) would be borne by the Colony, according to the foregoing propositions.

15. Finally, conceiving it to be very desirable that any such permanent Force should be supplemented by Volunteer Corps, and that with this view it is proper that encouragement should be extended to the Corps already enrolled, the Council advise that the following, amongst others of the recommendations in their regard, made by a Select Committee of the late Legislative Council, should be adopted and acted upon, namely:—

- (1.) The providing a suitable building for depositing the arms, accoutrements, and uniforms of the Corps, when not in use; and
- (2.) The providing the members with uniforms, at the public expense, under such restrictions as may be found necessary, to prevent any improper waste either by reason of persons joining a Corps and leaving shortly afterwards, or in any other manner.

*Executive Council Office,  
Sydney, 1 August, 1856.*

MICL. FITZPATRICK,  
Clerk of the Council.  
No. 56-554.

GOVERNOR SIR WILLIAM DENISON to THE SECRETARY OF STATE FOR THE COLONIES.

No. 127.

*Government House,  
New South Wales,  
Sydney, 14 August, 1856.*

SIR,

I have the honor to acknowledge the receipt of your Despatch No. 41, dated 22 March, 1856, in which you inform me, that in accordance with the request contained in my Despatch No. 137, dated 8 September, 1855, a Company of Artillery has been placed under orders to proceed to Sydney—the distinct understanding being, that full provision is to be made by the Colonial Legislature for defraying the whole of the expenses connected with the pay, maintenance, and transport of these Troops.

2. I beg to express the satisfaction which I feel at the ready compliance with my request that a Company of the Royal Artillery should be substituted for a Colonial Company; and I have no doubt but that the Legislature will make the necessary arrangements for the pay and maintenance of this Company for the future—ample provision having been made for the pay and transport of the men in the Estimates for the present year.

3. I forward herewith the copy of a Minute submitted for the consideration of the Executive Council, with an extract of the proceedings of the Council with reference to the general question of the defence of the Town and Harbour of Sydney. Before, however, I bring under your consideration the special matters to which reference is made in these proceedings, I wish to draw the attention of Her Majesty's Government to a general question involved in them, namely, the mode in which the pay and maintenance of the Troops required for the defence of the Colonies should be provided.

4. I trust that I shall not be considered as overstepping the limits imposed upon me, as Governor of a particular Colony, when I deal with a question, in the solution of which the Mother Country has a deep and permanent interest, and which only concerns New South Wales in common with all the other Colonies of the Empire; with the exception, of course, of those which, from their position and circumstances, must be looked upon more as Military Posts than as Colonies. I have, however, the less hesitation in bringing this subject under the notice of Her Majesty's Government, as I am confident that the establishment of some general principle, applicable alike to all Colonies, will, if founded upon a fair consideration of the relative advantages to the Mother Country and the Colonies of the connection which exists between them, draw closer the ties which should unite the members of one great national family, and prolong, indefinitely, an union which, if based on principles of reciprocity, cannot but prove advantageous both to the Parent State and the Colony.

5. At present the rule in the Australian Colonies appears to be, that any military force which may be required, whether for defence against external aggression or for purposes of police, with the exception of a small force sufficient to furnish the guards upon the buildings and stores belonging to the Imperial Government and that ordinarily stationed at Government House, should be maintained at the expense of the Colony.

6. This rule, however, appears to be based upon no general principle, and to have been established with reference to these Colonies, merely, because it was supposed that the Revenue was able to bear the expense. It does not, I believe, apply to New Zealand, or to the Cape of Good Hope. In fact it is an arbitrary rule, and, therefore, one to which exception may justly be taken.

7. In the first place, the rule applies equally to the Force which (as in the case of Victoria) is required for Police purposes, and to that which, in the case of New South Wales, is wanted solely for defence against external aggression; that is, against attacks which have their origin in causes over which the Colony has no control; in disagreements between the Mother Country and Nations like the French and Americans, with whom it is the interest of the Colony to remain upon the best terms, but with whom the Mother Country, for reasons based upon Imperial interests, chooses to go to war. In the second place, the rule is not applied to other Colonies like New Zealand and the Cape of Good Hope, where the Military Force is required for the defence of the people against the attacks of an enemy within the limits of the Colony itself, and whose enmity is caused, in great measure, by the conduct of the Colonists themselves. If, then, in their case, the Imperial Government is bound to maintain the Troops necessary for the defence of the Colonists, "*a fortiori*" the cost of the defence of a Colony which is placed in danger by no fault of its own, but by the deliberate act of the Mother Country herself, should be defrayed from Imperial Funds.

8. I have contrasted the course pursued with regard to different Colonies, for the purpose of making its anomalous character more apparent, not with any view of claiming immunities with regard to the payments now made by New South Wales.

9. I perfectly admit that every Colony ought to be called upon to defray a portion, and that a large portion of the cost of its defence, even against aggression from without; and that a Military Force kept up for purposes of internal police should be paid for out of the Colonial Revenue. But while I admit this, I maintain, on the other hand, that all Colonies have a fair claim upon the Mother Country for assistance against external aggression. And I propose now to consider the mode in which the nature and amount of such assistance should be determined, and the extent to which the Colony should be called upon to contribute towards the expense.

10. In the first place, I must express my deliberate opinion, that whatever may be the constitution of the Military Force to which the defence of the Colony is entrusted, its usefulness must depend upon that unity of action which can only result from unity of administration; in fact, the Military Force must be under one head; there must be no shuffling of responsibilities from one Chief to another; and if British Troops are to assist in the defence of a Colony, the whole of the Force, whether of Militia or Volunteers, brigaded with the regular Troops, should be under one head—and be subjected to one system of discipline.

11. In some Colonies, as, for instance, in those of North America, it may be possible, and indeed necessary, looking to the character of the Force which may be directed against them, that the Militia should form a large portion of the available Military strength; and at the Cape of Good Hope, the character of the enemy to be encountered, and that of the Country generally, would seem to indicate the advisability of combining with a regular Military Force a body of irregular Troops, whose knowledge of the Country and of the habits of the people against whom they are acting, would render their services invaluable.

12. In the Australian Colonies, at all events at present, any attempt to organize a Militia would prove a failure, and the cost would be enormous. The rate of wages is so high, and the restlessness of the working population, in consequence of the present state of the Gold Fields, so great, as would render any attempt to subject a body of Militia to the rules of Military discipline altogether unavailing.

13. But, whatever may be the mode in which the Military Force may be raised or organized, the rule which I propose to lay down with reference to the cost of its maintenance should apply generally; and this rule may be briefly stated as follows,—that the Mother Country and the Colony should contribute towards the expense in equal proportions.

14. As the Government of the Colony will have, under this arrangement, the responsibility of providing so large a proportion of the cost of the Military Force, it should have, as in point of fact it *must* have, through the Vote of the Legislature, the responsibility of determining



determining the amount of that Force which ought to be maintained, whether in time of peace as a precaution, or in time of war for the actual defence of the Country.

15. I do not think it necessary to go into the incidental questions to which the peculiar circumstances of individual Colonies might give rise. I mean those relative to the advantages and disadvantages incident to the connexion with the Mother Country. I assume, as an undoubted fact, that with reference to the Colonies generally, as well as to the Mother Country, this union is a very great advantage. I am confident, that so far as the Mother Country is concerned, it is much more to her interest to have friends and connexions in every quarter of the Globe upon whose assistance she can rely, and who will sympathise with her either in failure or success, coupled as this advantage may be with the obligation of assisting in the defence of these friends and relations, than that she should be met everywhere either by active enemies or by jealous neutrals,—and I am equally confident that it is more to the interest of the Colonies to form part and parcel of a great Empire, of whose glory they partake, of the prestige of whose greatness they have the benefit, on whose strength they can rely, than to be placed in an independent position, subject to no control either as regards their intercourse with each other or with foreign nations,—even although this connexion with the Mother Country should subject them occasionally to the losses consequent upon wars in which the Parent State may engage.

16. Having thus stated generally, as applicable to all Colonies, the principle which is enunciated in the enclosed proceedings of the Executive Council, and applied to the peculiar circumstances of New South Wales, I will proceed to comment upon the particular application of the rule, and will show, briefly, the changes which it will make in the state of things as now existing in this Colony.

17. In the first place, it is proposed that the expense of the construction and maintenance of all Military Works and Buildings should be defrayed from the funds of the Colony, and, as a corollary to this, that the different buildings, such as Barracks, Stores, Magazines, &c, which are now in existence, should be transferred to the Colonial Government.

18. It appears to me but right and proper, that all permanent works erected on the soil of the Colony for the purpose of defence should be paid for out of the Colonial Revenue; and, as there can be no possible object gained by the retention in any department of the Government at Home of the property in the buildings hitherto erected for Military purposes, confidence ought to be shown in the proper application of them by the Colonial Government to the exigencies of the Colony, and the more so as by the adoption of this rule the cost of erecting any new buildings will have to be defrayed out of the Colonial Revenue.

19. It will be seen that at present the Government does not consider that any addition will be required to the force already allotted to the Colony—that force amounting to one Regiment, averaging 600 men, and one Company of Artillery. Under the distribution of the expense as now proposed, some trifling alteration in the amount actually charged to the Colony may probably occur. At present the Colony pays for two Companies of the Regiment quartered here, and the Imperial Government is charged with the cost of four Companies. By your Despatch No. 41, the Colony is charged with the whole expense of the Company of Artillery, the amount of which I am not in a position to state. By the proposed arrangement, the whole expense of the maintenance of the Troops above mentioned will be divided into two equal parts, of which the Colony will pay one, and the Imperial Government the other.

20. I may observe, that by the adoption of this general principle, it may be possible to make reductions in the cost of the Commissariat, and of the other Departments connected with the Military System. The contracts for supplies of different kinds might be made through the Colonial Government, and the pay might be issued from the Colonial Treasury to the Paymaster of the Regiment,—Bills being drawn upon the British Treasury by the Colonial Government for the Imperial proportion of the cost of the pay and maintenance of the Troops; to these details, however, it is unnecessary that I should allude further at present.

21. I will now proceed to explain that portion of the recommendation of the Executive Council which has reference to the extent of Naval co-operation required for the defence of the Harbour,—I mean the amount of the Naval Force, which, being intended to have special and entire reference to the defence of the Harbour, should be subjected to the operation of the rule before laid down, namely, that the Colonial and Home Government should be jointly liable to the expense.

22. It will be seen that the assistance of a Gun-boat, worked by steam, is considered to be an essential element in the scheme of defence; and it is most desirable that the command of this Gun-boat should be vested in an Officer holding Her Majesty's Commission, who would have the means of maintaining proper discipline among his men, and who would be able to exert an authority which no Officer acting under a Colonial Commission could hope to do.

23. The power and armament of this vessel I need not define. Among the numerous Gun-boats which have been constructed for service in the Baltic, one might be selected to be employed in this Colony. I would only remark, that the steam power should be sufficient to propel the vessel, with its full armament on board, at a rate of at least 9 or 10 miles per hour. Should it be found necessary to employ this vessel for any Colonial purpose, the cost of sailing her, that is of the fuel and other incidental expenses, will be borne by the Colony; if, on the contrary, it should be wished to detach her for any special service having relation to Imperial interests, the consent of the Local Government having been first obtained, these charges will be defrayed by the Imperial Government.

24. I do not think it necessary to go further into detail at present; the extract of the proceedings of the Executive Council will shew that the Government has adopted the scheme for the defence of the Harbour, as laid down in my former Minutes, and as herein explained by me.

25. The question will shortly be submitted to the Legislature with reference to the amount of expense chargeable to the Colony. When the result of this reference is known, I shall be able to speak more positively as to all the arrangements. I have thought it advisable, however, to submit at once my views as to the principle upon which the relative contributions of the Colony and the Mother Country should be determined, as, whatever the decision of the Legislature may be, as to the character and amount of the force required for the defence of the Colony, the principle upon which the cost of this force is to be shared between the Imperial Government and the Colony should be clearly defined and established.

I have &c.,

W. DENISON.

THE RIGHT HONORABLE  
THE SECRETARY OF STATE  
FOR THE COLONIES.

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1856.

NEW SOUTH WALES.

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**COMMISSARIAT STORES.**

(TRANSFER OF.)

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*Return to Address ;—MR. NICHOLS, 13 December, 1856*
*Ordered by the Legislative Assembly to be Printed, 18 December, 1856.*


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THE SECRETARY OF STATE FOR THE COLONIES to GOVERNOR SIR W. DENISON

No. 104.

*Downing-street,  
2 September, 1856.*

SIR,

I referred, for the consideration of the Secretary for War, a copy of your Despatch No. 44, of the 3rd March last, and I have to acquaint you, that Lord Panmure has informed me in reply, that he has authorized the transfer of the Commissariat Buildings, in Lower George-street, Sydney, to the Colonial Government, on the conditions proposed in your Despatch above-mentioned, viz., that sufficient accommodation shall always be provided, at the expense of the Colony of New South Wales, for such stores as the Commissariat may require to keep in hand for the Naval or Military Services—the remaining space only to be available for Colonial purposes.

I have, &amp;c.,

H. LABOUCHERE.

GOVERNOR SIR WILLIAM DENISON,  
&c., &c.,  
New South Wales.

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1857.

NEW SOUTH WALES

## COMMISSARIAT STORES.

(TRANSFER OF.)

*Further Return to Address: MR. NICHOLS, 13 December, 1856.**Ordered by the Legislative Assembly to be Printed, 2 January, 1857.*

44.

SIR WILLIAM DENISON to THE RIGHT HONORABLE SIR GEORGE GREY.

*Government House,  
Sydney, 3 March, 1856.*

SIR,

My Predecessor, in a Despatch No. 162, dated 13th November, 1854, brought under the notice of the Secretary of State certain facts connected with the Buildings in Lower George-street appropriated to the Commissariat, which, at the time, seemed to warrant the supposition that these buildings were not among the number of those which it was intended to transfer to the Colony.

2. In a Despatch No. 28, dated 23rd March, 1855, the copy of a letter from Lord Panmure was enclosed, in which it was said that these Buildings would seem to come strictly within the definition of those Military Buildings required for the preservation of Stores, the transfer of which to the Colony was not contemplated by Her Majesty's Government, under the general arrangements on the subject, sanctioned in 1849.

3. Without attempting to dispute the accuracy of this statement, I would observe that the Buildings in question are of an extent far beyond the probable wants of the service; that the ordinary and current repairs, if executed properly, would amount to a large sum annually; and that, if these repairs are not executed, the Buildings will in a short time become useless, either to the Home Government or the Colony.

4. I would therefore beg to submit, that the arrangement which has been made to apply to the Barracks and other Buildings under the charge of the Ordnance Department, may be made applicable to this Building also, under the condition that sufficient accommodation should always be provided, at the expense of the Colony, for such Stores as the Commissariat may require to keep in hand, either for the Naval or Military Service.

I have, &amp;c.,

W. DENISON.

THE RIGHT HONORABLE  
SIR GEORGE GREY.

162.

*Government House,  
Sydney, 13 November, 1854.*

SIR,

In my Despatch No. 157 of the 29th November, 1853, I reported that certain additional Buildings had been taken over to be maintained at the expense of the Colony. These consisted of the Staff Offices and Medical Depôt, Macquarie-street, Sydney, Brigade Major's Quarters, Bent-street, Commissariat Treasury, old Barrack Square, Commissariat Transport Establishment. But the Commissariat Stores, in Lower George-street, were not included in this arrangement, as the Deputy Ordnance Storekeeper reported in a letter, a copy of which accompanied my Despatch, that they were used to a considerable extent for the accommodation of the Naval Service.

2. Subsequently I had the honor to receive the Duke of Newcastle's Despatch, Military, No. 7, of the 7th December last, enclosing a correspondence with the Board of Ordnance, respecting the maintenance of the Commissariat and Staff Buildings, and an estimate for works and repairs for them in 1854-5, which it was stated should have been submitted to the Colonial Government, it not being intended that any portion of the expense proposed in it should be defrayed from Imperial Funds; but having reason to

believe, from the omission of the Commissariat Store Buildings in the List of those transferred to the Colony, forwarded with my Despatch No. 157, and also from there being a question whether a portion of the expense should not be borne by the Admiralty, that some further instructions on the subject may be expected. I have deferred for the present taking any step with a view to their being taken over by the Colony. This, it appears, will not occasion any inconvenience, as it has been reported to me by the Deputy Ordnance Storekeeper, in a letter of which I enclose a copy, that the repairs proposed in the estimate already referred to, may not be immediately undertaken.

3. I may, however, add, that as it is likely, in the event of the Buildings being taken over by the Colony, the Legislative Council would desire that they should, to a certain extent, be made available for Colonial Stores, I caused inquiry to be made on the subject, of the Deputy Commissary General, and Deputy Ordnance Storekeeper, and I transmit for your information a copy of a letter from the former Officer, which, although it does not furnish the Report which it was my intention to have obtained, shews the purposes for which these Stores are, and may be hereafter, required.

I have, &c.,  
CH<sup>s</sup>. A. FITZ ROY.

THE RIGHT HONORABLE  
SIR GEORGE GREY, BART.

28.

*Downing-street,*  
23 March, 1855.

SIR,

I have communicated to Lord Panmure a copy of your Predecessor's Despatch, No. 162, of the 13th November, respecting the transfer and maintenance, at the expense of the Colony, of certain buildings appropriated to the Commissariat in Lower George-street, and I now transmit, for your information and guidance, a copy of his Lordship's reply.

I have, &c.,  
G. GREY.

GOVERNOR  
SIR WILLIAM DENISON.

*War Department,*  
16 March, 1855.

SIR,

I have laid before Lord Panmure your letter of the 24th ultimo, and the Despatch enclosed in it from the Governor of New South Wales, relating to certain buildings in Lower George-street, Sydney, now occupied as a Commissariat Store.

I am to acquaint you in reply, that, adverting to the uses made of these buildings as described in the Report of the Deputy Commissary General, enclosed in the Governor's Despatch, Lord Panmure considers that Sir Charles Fitz Roy has acted properly in declining for the present to take any steps for transferring them to the Colony. They would seem, indeed, to come strictly within the definition of those Military Buildings required for the preservation of Stores, the transfer of which to the Colony was not contemplated by Her Majesty's Government under the general arrangement on the subject sanctioned in 1849.

I am, &c.,  
G. C. MUNDY.

H. MERIVALE, Esq.

1857.

NEW SOUTH WALES.

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**TOWNSHIP OF NOWRA.**  
(PRAYING ESTABLISHMENT OF PUBLIC BUILDINGS IN.)

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*Ordered by the Legislative Assembly to be Printed, 22 January, 1857.*

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To the Honorable the Legislative Assembly of New South Wales.

The Petition of the undersigned, Landed Proprietors, residing in the District of Shoalhaven,  
MOST RESPECTFULLY SHEWETH:—

That your Petitioners were induced to purchase land in the District of Shoalhaven, under the impression that Nowra, being the only Government Township in this District, would naturally derive all the advantages which public buildings erected thereon would impart to its rise and prosperity; the high roads passing through to Braidwood, Ulladulla, and Broulee, irrespective of the local roads to Burria, Barmgella, Wagamia, and other settled localities of rising importance, embracing no insignificant population, all on the banks and towards the head of the navigable waters of the Shoalhaven, opposite Nowra. On the northern side of that river is a very extensive and populous part of the District, principally landed proprietors in the immediate vicinity of Nowra; there is a dense population, several stores and public houses, also the ferry to the north side of the river, meeting Sir Thomas Mitchell's line of road on the opposite side to Kiama, Wollongong, and Sydney.

Your Petitioners in respectfully submitting the above facts to your consideration, had always understood that Government Townships would have the pre-eminence of all public buildings, particularly as in this instance, when public necessity and convenience evidently required such erections; and Petitioners, therefore, pray that the usual principle will be recognized in establishing the Township of Nowra, and that your Honorable House will consider the immediate necessity of reserving a suitable site in the said Township for a Court House, School, and Post Office.

And, as in duty bound, your Petitioners will ever pray.

[Here follow 67 Signatures.]

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1856.

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 NEW SOUTH WALES.
 

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 MACDONALD RIVER.
 

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(ROAD THROUGH THE VALLEY.)

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*Ordered by the Legislative Assembly to be Printed, 28 October, 1856.*


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To the Honorable the Legislative Assembly of New South Wales, in Parliament Assembled.  
 The humble Petition of the undersigned Landowners and Residents on the Macdonald River,  
 Lower Hawkesbury,

RESPECTFULLY SHEWETH,—

That, from unforeseen natural causes, added to the continual and increased amount of traffic thereon, the road from Melon Creek, near the head of the Macdonald River, to its junction with the Great Northern Road, near Wiseman's Ferry, has become so ruinous and dilapidated, and in many places dangerous, as to be all but impassable, and totally unfit for the usual transit requirements of the District.

That, from peculiarity of position, it being an isolated portion of the District, your Memorialists have entailed upon them the individual expense of making and keeping their only thoroughfare in passable repair. This they have hitherto, at great outlay and inconvenience, been enabled to do, notwithstanding the circumscribed and difficult features of the locality, without applying for assistance in any quarter; but a long continuance of wet seasons, together with the wear and tear consequent upon an increased amount of traffic, added to a scarcity of available labour, has reduced the thoroughfare in question to a most ruinous condition.

Your Memorialists would further most respectfully beg leave to submit to your Honorable House, that since its first location, now forty years since, the entire road through the Valley of the Macdonald has been formed, despite the natural obstacles, by the unaided capital of the residents; they have, to the best of their humble means, endeavoured to keep it in at least passable condition, until the accumulation of unforeseen causes has rendered the impediments so numerous and formidable as to be beyond their power to remedy.

Your Petitioners beg to represent, that their District is very fertile, and comprises about six thousand acres of rich land under cultivation.

Under these circumstances, the Petitioners pray your Honorable House to take their case into consideration, and adopt such measures as your Honorable House may deem expedient.

And your Petitioners will ever pray.

[Here follow 128 signatures.]

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1856.

NEW SOUTH WALES.

## APPIN AND EAST BARGO.

(ROAD FROM APPIN TO LUPTON'S INN.)

*Ordered by the Legislative Assembly to be Printed, 11 November, 1856.*

To the Honorable the Members of the Legislative Assembly of New South Wales.

The Petition of the undersigned Owners and Occupiers of Land, in the District of Appin and East Bargo,—

RESPECTFULLY SHEWETH :

That, many years back, a line of Road was traced out through these Districts leading over the Cataract and Nepean Rivers, at the junction of the latter with the Cordeaux, and joining the present Southern Road near Lupton's Inn, West Bargo.

That this line of Road, marked out by a Government Officer of high reputation, presented many and great advantages to travellers between Sydney and Goulburn, inasmuch as in the event of its formation, not only would the distance be shortened by several miles, but the general level character of the country chosen would greatly facilitate the carriage of heavy goods, while a very considerable quantity of available land would be brought under cultivation, and extensive territories within an easy distance of the Metropolis, and as yet unalienated by the Crown, would readily find purchasers, access being given by the proposed line to a certain market.

That, some years ago, it was generally understood that Government was prepared to build bridges over the Cataract and Nepean Rivers, which Rivers present the only engineering difficulties worth speaking of on the line, and that, on the faith of this generally received opinion, many of your Petitioners invested capital in these Districts, purchasing and cultivating land and building houses, believing the construction of the new line of road would render not only encouragement but remuneration to their toils.

That, failing steps on the part of Government, your Petitioners themselves, from the necessity of the case, to get their produce to mill or market, have from time to time gathered together, and by voluntary labor, placed parts of the line in a condition of usefulness, which only makes them the more sensible of the many disadvantages occurring to their Districts from the non-formation of the whole, it being, perhaps, sufficient to mention that land on the Cumberland side of the Cataract fetches, at auction, five times the amount of that on the Camden side, there being no actual difference in the quality.

That the interests of your Petitioners have received considerable injury from the circumstance that, a few years back, the then existing Government sanctioned the incorporation of a Company, who undertook to build the bridges over the Cataract and Nepean Rivers, at the localities in question, and all other such works of a more trifling description as should be necessary to open and give full effect to the line; which Company, if ever formed at all—which your Petitioners have cause to doubt—suffered its acquired privileges to lapse by defluxion of time, being, it was supposed, daunted at the high price of labor, but also threatening us, your Petitioners, with pains and penalties, when it was thought we were about, by private efforts, to make the said line available.

That your Petitioners entirely disclaim any wish or intention of injuring any properties situated on any other line to the southward, but only request of a paternal and popular Government to assist them in removing such obstacles as most interfere with their local advancement and prosperity; and being for the most part an industrious community of small farmers, without any individual resident among them sufficiently prominent by wealth or station to press their claims continually under the notice of the Administration, they are emboldened to believe that your Honorable Assembly will the more readily assume the grateful offices of their patron and benefactor, taking into full consideration this statement of their wants, and extending a ready assistance to a population that has so long waited for the removal of impediments pressing so heavily on its progress and prosperity. Your Petitioners, therefore, aware that bridges have been thrown, at great cost, over other Rivers, on which, comparatively, they were less required, now humbly and respectfully beg of your Honorable House to vote such a sum out of the General Revenue of the Colony as shall suffice for the construction of substantial viaducts over the Cataract and Nepean Rivers, so that there may be a short, level, and direct line of traffic between Campbelltown and Appin, and Berrima and Goulburn.

But, if this proceeding should not seem fit to your Honorable Assembly, your Petitioners would, in that case, the more earnestly request that such a sum at least, might be placed upon the Estimates, and vested in the hands of local trustees, who shall be accountable to the Government, as shall cover the expenses of making the present bridle track from Appin to Lupton's Inn available for drays and carriages, having especial view to the formation and preservation of safe passing places over the said Cataract and Nepean Rivers.

And your Petitioners will ever pray.

*[Here follow 47 Signatures.]*

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1857.

NEW SOUTH WALES.

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**LOCHINVAR ROAD.**

(CORRESPONDENCE RELATIVE TO.)

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*Ordered by the Legislative Assembly to be Printed, 13 March, 1857.*


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RETURN to an *Order* of the Honorable the Legislative Assembly, dated 30 December, 1856, for :—

“ Copies of all Correspondence between the Executive Govern-  
 “ ment and the Commissioners of the Maitland Road Trust,  
 “ upon the subject of the dangerous condition of the Lochinvar  
 “ Road, and also a copy of the Estimate for the Repairs of the  
 “ Lochinvar Road, prepared and transmitted by the Commis-  
 “ sioners of the Maitland Road Trust, at the request of the  
 “ Executive Government.”

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**SCHEDULE.**

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## LOCHINVAR ROAD.

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No. 1.

THE DEPUTY-SURVEYOR GENERAL to THE SURVEYOR GENERAL.

1 February, 1856.

SIR,

Having reference to that part of your Memorandum\* of 17th January, No. 56-91, in which you request me, during my visit to Maitland, to have regard to any local matters which my knowledge of the Service may seem to render advisable,—

1. I have the honor to report to you, that the High North Road, between Lochinvar and the turnpike at West Maitland, is in such a state as to endanger the public safety. I understand there are funds for its repair, and some work is proceeding with, but so slowly as to be useless. I am of opinion that the trustees should be urged at once to place upon the road all the labour they can obtain, or enter into a contract for its judicious repair within a short period. The road being 100 feet wide, it is of course impossible to keep such a great breadth from the action of water, and hence its dilapidated state, and the necessity for some determinate arrangement for its drainage, so that a small breadth of metal may be placed on it.

The traffic on this road is very great. Drays with twelve bullocks, or from eight to ten horses, line this, almost impassable, route, and shew the expediency of supplying its place by a railway, which would, no doubt, pay some interest, whilst the great expense incurred in attempting to keep such a road as this in repair would be avoided.

2. I have further to report, that the road which leads from the Punt at Raymond Terrace to Newcastle, Maitland, and intermediate places, is impassable, owing to the great quantity of rain which has lately fallen. At all times this road is in a very bad state, and as it will be one of the principal feeders to the railway (which will be opened in a few months), in consequence of the whole of the traffic of the county of Gloucester centering at Raymond Terrace, while the rich lands through which the road passes are being brought into cultivation very rapidly, it appears to me that the attention of the trustees should be directed to its immediate repair. I understand a sum of money has been voted for it; this should be spent at once, however high labour may be, or however great the expense of obtaining materials; at all events, the water-holes should be filled up, otherwise serious accidents may be expected.

I am, of course, aware that in all parts of the Colony the roads are in a very bad state, and must remain so, in consequence of the great and heavy traffic upon them, until their place is supplied by railways; but in the cases to which I have alluded, there appear to be funds available for repairs, and the repairs are so much needed, that any hesitation in the application of the funds is greatly to be regretted.

The road from Black Creek to Singleton, and onwards, is being put into a very good state by Mr. Collett, who has judiciously curtailed the width of the road, and provided ample drainage.

I have, &c.,

JNO. THOMPSON,

Deputy-Surveyor General.

THE SURVEYOR GENERAL,  
&c., &c., &c.

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\* Not furnished, as it has reference to general matters.

## No. 2.

THE SECRETARY TO THE MAITLAND ROAD TRUST to THE COLONIAL SECRETARY.

Maitland, 20 June, 1856.

SIR,

I have the honor, by direction of the Maitland Road Trust, to enclose you a resolution passed at a Meeting of the Commissioners, held on the 23rd April.

You will observe that such resolution is with reference to the Report of the Deputy-Surveyor General on the state of the road at Lochinvar.

The Commissioners request me to point out, that (with the exception of the Wollombi) all the roads from the interior are united above Lochinvar, and are there fenced into one line, and as this line passes over three or four miles of swampy country, of a soft black soil, it is impossible, without a larger outlay, to form and maintain a road suitable for the immense traffic passing over.

Further in the interior, the roads in such bad places are not fenced in, and consequently are not so cut up.

The Commissioners also request me to point out, that the last year's advances were laid out by the Commissioners partly in the repair of this portion of the road, the total advance for all that line in the district being £475; and that, in the same time, they expended on that portion of the road from Maitland to Lochinvar, £1,095 16s., raised from the Tolls, while the amount of Tolls legitimately arising from that portion of the road was calculated at £690 only.

Nearly the whole of the previous year's advance, viz., £430 10s., was, it will be remembered, paid over by the Trust to Mr. Collett, the Government Surveyor, for the building of two bridges (one of which has never been gone on with), so that in that year the whole expenditure was derived from the Tolls. Thus, at the end of last year, this portion of the road was indebted, for expenditure above the income derivable therefrom, to the amount of £355 5s. 10s.

The Commissioners trust His Excellency will recognize the exertions made by the Trust to do the works so urgently required, and trust he will be pleased to allow, from the funds at his disposal, such sum as the Deputy-Surveyor General may think reasonable for performance of the repairs referred to in his Report.

I have, &c.,

JOSEPH CHAMBERS,

Clerk.

THE HONORABLE

THE COLONIAL SECRETARY.

[Enclosure in No. 2.]

At a Meeting of the Maitland Road Trust Commissioners held on the 24th April, 1856.

It was resolved,—

That the Colonial Secretary be written to, requesting him to place a sum of money at our disposal sufficient to enable us to put the High North Road between Lochinvar and the turnpike at West Maitland in a judicious state of repair—for by the Deputy-Surveyor General's Report sent to the Commissioners of the Road Trust, that road is described as being in such a state as to endanger the public safety. Also, to inform the Colonial Secretary, that unless assisted by the Government, it is utterly impossible for the Road Trustees to do any permanent good to that road with the inadequate funds at their disposal, receiving only £1212 per year from the turnpike at West Maitland, to be expended over a distance of ten miles on the High North Road, and a distance of twelve miles over the Wollombi Road, those roads being in a dreadful rotten and dilapidated state; the Commissioners also think that as very large sums of money, amounting to several thousand pounds, have been expended between Black Creek and Murrurundi Gap, in justice to the public a fair share of this money ought to have been expended between Black Creek and Morpeth, and that Mr. Chambers be instructed to communicate this resolution to the Colonial Secretary, and adding anything he may see fit.

JOSEPH CHAMBERS,

Clerk.

## No. 3.

THE COLONIAL SECRETARY to THE SECRETARY TO THE MAITLAND ROAD TRUST.

Colonial Secretary's Office,  
Sydney, 31 July, 1856.

SIR,

In reply to your letter of the 20th June last, enclosing a copy of a resolution passed at a meeting of the Commissioners of the Maitland Road Trust, on the 23rd April, relative to the state of the road at Lochinvar, and applying for a sum of money to be expended thereon, I am directed to request that an estimate may be furnished of the probable expense of the proposed repairs.

I have, &c.,  
W. ELYARD.JOSEPH CHAMBERS, ESQ.,  
Maitland.

## No. 4.

THE SECRETARY TO THE MAITLAND ROAD TRUST to THE COLONIAL SECRETARY.

Maitland, 28 August, 1856.

SIR,

In pursuance of your request, I beg to submit to you the Estimate of the Road Trust Surveyor, for efficiently repairing that portion of the Singleton Road referred to in the Report of the Deputy-Surveyor General.

I also enclose a copy of the Account of Receipts and Disbursements on this portion of the road up to the 30th June last, whereby it will appear that £976 11s. 5d. has already been expended in excess of the receipts, and that consequently the means available to the Trust are totally inadequate to the performance of this work.

I have, &c.,  
JOSEPH CHAMBERS,  
Clerk.THE HONORABLE  
THE COLONIAL SECRETARY.

[Enclosure 1 in No. 4.]

MEMORANDUM for Mr. Chambers, Clerk to the Commissioners of the Maitland Road Trust.

I beg to submit to you the following statement:—

Commencing near the 4th mile, and extending to the piece of road lately made, a distance of 145 chains, cutting required on each side, 6 feet wide, and 20 inches deep, making roadway 30 feet wide, 4,135 cubic yards earthwork, at 2s. per yard	413	0	0
Between the 6th and 8th miles, a distance of 101 chains, cutting about 14 feet wide on one side, 2 feet 6 inches deep, making roadway 30 feet wide, 4,320 yards of earthwork, at 2s. per cubic yard	432	0	0
Between the 8th mile and the foot of Harper's Hill, a distance of 65 chains, cutting mostly on one side 14 feet wide, and 2 feet 6 inches deep—roadway, 30 feet wide, 2,979 cubic yards earthwork, at 2s. per cubic yard	297	18	0
Four small bridges or drains would be required—to erect them with timber, 702 feet at 2s. per foot	71	4	0
200 slabs to each bridge, at £6 per 100	12	0	0
	332	16	0
To place broken stone upon 25 chains of the worst part, including approaches to bridges, 1,100 cubic yards, at 8s. per yard	440	0	0
	£1,915	14	0

You will perceive that I have only included metalling for a very small portion of the road, and it is very desirable that this small piece should be metalled; it is situated near the foot of Harper's Hill, being a deep black soil, retaining water a great length of time, and one of the worst places on the road.

I am, &c.,  
JAMES FERGUSON,  
Superintendent.

[Enclosure



LOCHINVAR ROAD.

[Enclosure 2 in No. 4.]

Cr. From 31 December, 1855, to 30 June, 1856. Dr.

SINGLETON ROAD.		SINGLETON ROAD.	
By half Campbell's Hill ...	252 10 0	To Balance ...	355 5 10
„ Long Bridge ...	64 1 2	Expended ...	937 16 9
„ Balance ...	976 11 5		£1,293 2 7
	£1,293 2 7	To Balance..	£976 11 5

JOSEPH CHAMBERS,  
Clerk to Maitland Road Trust.

No. 5.

THE COLONIAL SECRETARY to THE CLERK TO THE MAITLAND ROAD TRUST.

Colonial Secretary's Office,  
Sydney, 3 October, 1856.

SIR,

I am directed to inform you, with reference to your letter of the 28th August, enclosing an Estimate from the Road Trust Surveyor, of the expense of repairing a portion of the road between Maitland and Singleton; that the application for the amount required, namely, £1,915 14s., will be taken into consideration in the distribution of the sum which may be provided for the repair of the roads in the ensuing year.

I have, &c.,  
W. ELYARD.

J. CHAMBERS, Esq.,  
Clerk to the Commissioners of the  
Maitland Road Trust.

No. 6.

THE SECRETARY TO THE MAITLAND ROAD TRUST to THE SECRETARY FOR LAND AND PUBLIC WORKS.

Maitland, 17 January, 1857.

SIR,

I am directed by the Commissioners of the Maitland Road Trust to point out to you, that the portion of road near Lochinvar—for repair of which a grant of £1,900 was recommended by the Board of Works—was never formed by the Government; it lies along a level alluvial flat, and no trace whatever can be seen of the road having been formed. In wet weather this country becomes a swamp; and owing to the road being now confined in many places between fences, it becomes at times dangerous and almost impassable. It should be borne in mind that this road is the highway into which various roads from the interior lead, and where they merge into one. The traffic from the Cassilis country, from Liverpool Plains, the Gwydir, New England, Moreton Bay, and the Clarence, passes along this line of road, which being here confined by fences, must be properly formed before it can be made to withstand the continued wear to which it is exposed.

The correspondence between the Commissioners and the Government, in May last, shows that the funds at the disposal of the Trust are totally inadequate to the performance of this work, and that the Trust have already expended thereon a much larger sum than the tolls collected; so that unless the Commissioners sacrifice one portion of their Trust to another, or unless the Government give their assistance, that portion of the road must remain in its present unsafe and disgraceful condition.

The Commissioners direct me respectfully to point out, that the Report of the Deputy Surveyor General is conclusive on the fact of the road being in a dangerous condition, and

beg of you to consider on whom the responsibility of this should rest. The Trust received the road from the Government in that condition, and have never been given the means of improving it; moreover, the annual grant for road repairs (which though insufficient for any great improvement, assists in general and temporary repair,) was entirely withheld from the Maitland District for one year; so that the Commissioners have had less than the ordinary means to dispose of on this road.

The Commissioners trust, that when the various facts bearing on their claim be considered by the Government, the recommendation of the Board of Works will be adopted, and the amount estimated for the formation of this road, viz., £1,900, be placed on the Estimates for Expenditure in the present year.

I have, &c.,

THE HONORABLE  
THE SECRETARY FOR  
LAND AND PUBLIC WORKS.

JOSEPH CHAMBERS,  
Clerk.

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No. 7.

THE UNDER-SECRETARY FOR LAND AND PUBLIC WORKS to THE CLERK TO THE  
MAITLAND ROAD TRUST.

No. 3.

*Department of Land and Public Works  
Sydney, 28 January, 1857.*

SIR,

In reference to your letter of the 17th instant, pointing out that the portion of road near Lochinvar (for the repair of which a grant of £1,900 was, it is alleged, recommended by the Board of Works,) has never been formed by the Government,—I am directed, to inform you, that the Secretary for Land and Public Works is not prepared to recommend this large amount of money to be appropriated from the general road vote, without further investigation into the circumstances under which the Maitland Road Trust seems to have failed in keeping this road in passable repair.

2. I am at the same time to inquire, whether the Commissioners will be prepared to provide hereafter for the sufficient repair of the road under their charge, if it should be decided to allow the sum herein named.

I have, &c.,

THE CLERK TO THE  
MAITLAND ROAD TRUST.

MICL. FITZPATRICK.

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No. 8.

THE UNDER-SECRETARY FOR LAND AND PUBLIC WORKS to THE COLONIAL ARCHITECT.

*Department of Land and Public Works,  
Sydney, 28 January, 1857.*

SIR,

In forwarding to you a copy of a letter which has been received from the Clerk to the Maitland Road Trust, respecting the state of the Lochinvar Road, I am directed to request that you will be so good as to call upon Mr. Collett, who, it is believed, is employed at no great distance from the road in question, to report the amount at which he would be prepared to put this portion of road in good order, and that you will apprise me of the result, for the information of the Secretary for Land and Public Works.

I have, &c.,

MICL. FITZPATRICK.

THE COLONIAL ARCHITECT.

## No. 9.

THE COLONIAL ARCHITECT to THE SECRETARY FOR LAND AND PUBLIC WORKS.

*Colonial Architect's Office,  
Sydney, 5 February, 1857.*

SIR,

In attention to your letter of the 28th ultimo, relative to the Lochinvar Road, and requesting me to call upon Mr. Collett to report the amount at which he would be prepared to put it into good order; I do myself the honor to state, that Mr. Collett calculates the cost of the necessary repairs to this road, which is four miles in length, at £1,800, and would undertake to carry them out for that sum, if the work be done entirely under his supervision.

I have, &c.,

ALEXR. DAWSON,  
Colonial Architect.

THE HONORABLE  
THE SECRETARY FOR LAND AND PUBLIC WORKS.

## No. 10.

THE CLERK TO THE MAITLAND ROAD TRUST to THE SECRETARY FOR LAND AND PUBLIC WORKS.

*Maitland, 16 February, 1857.*

SIR,

In reply to your letter of the 23th January, respecting the grant of £1,900 for repair of the dangerous portion of the Lochinvar Road, I am requested to inform you, that the Commissioners court the inquiry, which they are glad to see you intend to institute respecting the road referred to, such inquiry they have no doubt will result in satisfactory proof that this portion of the road was never formed by the Government, and was, when delivered over to the Trust, in even a more dangerous condition than it is now in; that the Trust have already expended thereon far more than the amount collected thereon, taking the funds from those collected on other roads; and that the means at their disposal are totally inadequate to put this road into repair; when these facts are proved at such enquiry, the Commissioners trust the grant will be accorded to them.

They will be happy to supply any further information, or to give any assistance in their power, in the intended investigation.

I am requested further to inform you, that when the grant has been duly expended, which the Trust will be willing to guarantee shall be done with strict economy, they will be prepared to provide for the sufficient repair of the road, as far as the means at their disposal will permit.

I have, &c.,

JOSEPH CHAMBERS,  
Clerk.

THE HONORABLE  
THE SECRETARY FOR LAND AND PUBLIC WORKS.



1857.

## NEW SOUTH WALES.

## ROAD OVER WINDOWEE RANGE TO ADELONG DIGGINGS.

(CORRESPONDENCE RELATIVE TO.)

*Ordered by the Legislative Assembly to be Printed, 10 February, 1857.*

RETURN to an *Address* from the Honorable the Legislative Assembly, dated 25 November, 1856, praying that His Excellency the Governor General would be pleased to cause to be laid upon the Table:—

“Copies of all Correspondence that has passed between the Government and the Commissioner of Crown Lands for the Murrumbidgee District, and between that officer and Mr. Abraham Watson, on the subject of a Road cut by the latter gentleman over the Windowee Range to the Adelong Diggings.”

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## ROAD OVER WINDOWEE RANGE TO ADELONG DIGGINGS.

No. 1.

MR. ABRAHAM WATSON to THE COLONIAL SECRETARY.

*Adelong Creek,*

28 February, 1855.

SIR,

I am a storekeeper on the Adelong Creek; and the road leading to that flourishing Gold Field being so very bad as to be almost impassable, I have repaired and cut away a steep sideling hill—expenses thereon £150—and producing a most beneficial result. I do myself the honor to request that you will refer to any person who may be proper, and on finding that I have done as I write, I beg that you will advise His Excellency the Governor General to allow me a sum not exceeding £75, out of the Land Fund, which I am informed may be used for that purpose.

Your most humble, &amp;c.,

ABRAHAM WATSON.

THE HONORABLE

THE COLONIAL SECRETARY.

No. 2.

AUDITOR GENERAL'S REPORT ON FOREGOING.

A grant might perhaps be made to Mr. Watson out of the undrawn Balances at the credit of the Roads in the Murrumbidgee District, viz. :—

Albury.....	£542
Tumut.....	200
Moulamein .....	600
Wagga Wagga.....	250

Mr. Commissioner Lockhart might be requested to certify as to the utility to the public of the repairs stated to have been effected, and as to the value of the work.

J. S.

27 March, 1855.

No. 3.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.

*Colonial Secretary's Office,**Sydney, 16 April, 1855.*

SIR,

In transmitting to you the accompanying copy of a letter received from one Abraham Watson, applying for compensation for repairs to the Road leading to the Adelong Gold Field, executed at his own expense, I am directed by His Excellency the Governor General to request that you will call upon Mr. Commissioner Lockhart to report as to the utility to the public of the repairs stated to have been effected, and as to the value of the work for which this claim is made.

I have, &amp;c.,

W. ELYARD.

THE CHIEF COMMISSIONER

OF CROWN LANDS.

No.

No. 4.

THE COLONIAL SECRETARY to MR. ABRAHAM WATSON.

*Colonial Secretary's Office,  
Sydney, 18 April, 1855.*

SIR,

I beg to inform you, that it has been found necessary to refer to the Chief Commissioner of Crown Lands your letter of the 28th February last, applying for compensation for repairs made by you to the Road leading to the Adelong Gold Field.

2. When the required Report has been received, and the decision of the Governor General obtained upon the case, a further communication will be made to you without delay.

I have, &amp;c.,

W. ELYARD.

MR. ABRAHAM WATSON,  
Storekeeper, Adelong Creek.

No. 5.

THE CHIEF COMMISSIONER OF CROWN LANDS to THE COLONIAL SECRETARY.

*Crown Lands Office,  
Sydney, 13 June, 1855.*

SIR,

With reference to your communication of the 16th April last, No. 148, transmitting, for the report of Mr. Commissioner Lockhart, the copy of a letter received from one Abraham Watson, applying for compensation for repairs to the Road leading to the Adelong Gold Field, executed at his own expense, I now do myself the honor to forward the report of the Commissioner thereon. See No. 1.

2. Mr. Lockhart recommends that Mr. Watson should be called on to lay out £50 more on the cutting of water drains, and that he shall receive a moiety of his total expenditure, such moiety not to exceed £100, the work still necessary to be done to be pointed out by the Commissioner of Crown Lands.

3. It seems to me, that Mr. Lockhart's proposal to require the applicant to expend a further sum upon a work which is stated to be of great public utility before reimbursing him for the cost already incurred, is based upon a mistaken principle. If the claim already made be a just one, it ought to be acceded to, and if any further expenditure for the public convenience be necessary, it should be separately considered. I beg therefore to recommend that the sum applied for (£75) by Mr. Watson, may be paid to him.

I have, &amp;c.,

GEORGE BARNEY,

Chief Commissioner of Crown Lands.

THE HONORABLE  
THE COLONIAL SECRETARY.

[Enclosure 1 in No. 5.]

*Crown Lands Office,  
Sydney, 21 April, 1855.*

SIR,

In transmitting to you the annexed copy of a letter received from one Abraham Watson, applying for compensation for repairs to the Road leading to the Adelong Gold Field, executed at his own expense, I have to request that you will favor me with your report as to the utility to the public of the repairs stated to have been effected, and as to the value of the work for which this claim is made.

I have, &amp;c.,

GEORGE BARNEY,

C. C. C. L.

The Commissioner of Crown Lands,  
Murrumbidgee.

[Enclosure

[Enclosure 2 in No. 5.]

Murrumbidgee District,  
Crown Lands Office,  
28 May, 1855.

SIR,

See No. 1.

I do myself the honor to acknowledge the receipt of your letter of 21st April, 1855, No. 55-1017, enclosing a copy of a letter addressed to the Honorable the Colonial Secretary by Mr. Abraham Watson, of Adelong Creek, and ordering me to report as to the utility to the public of certain work done by Mr. Watson, for which he claimed compensation, and also to state the value of the work done.

In reply, I do myself the honor to state, that the Road made by Mr. Watson is of very great utility, and must have cost him more than the amount stated by him. The road out to Adelong, Tumberumba, passes through the gorge improved by Mr. Watson, and although he had received no guarantee, yet, I think, that he has a claim for consideration by the Government.

During the approaching summer, this Road will be of increasing service, and a very formidable impediment has been, in a great measure, overcome by the energy of Mr. Watson.

I have waited, however, until the winter rains had tested the work, and am obliged to report that there requires something more to be done by Mr. Watson, in the way of forming water conduits, which will involve a further outlay of perhaps Fifty pounds.

I would recommend that Mr. Watson should be informed that he must lay out Fifty pounds more on the cutting of water drains, and that he shall receive a moiety of his total expenditure, such moiety not to exceed One hundred pounds,—the work still necessary to be done to be pointed out by the Crown Land Commissioner.

I have, &amp;c.,

CHARLES GEORGE NORMAN LOCKHART,  
Commissioner of Crown Lands.

The Chief Commissioner  
of Crown Lands.

No. 6.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.

Colonial Secretary's Office,  
Sydney, 11 July, 1855.

SIR,

Having laid before the Governor General your letter of the 13th ultimo, No. 221, transmitting a report from Mr. Commissioner Lockhart, relative to the application made by Mr. Abraham Watson for compensation for repairs executed at his own expense to a Road leading to the Adelong Gold Field, I am directed to inform you that His Excellency cannot admit the principle, that a person laying out money without authority has a right to claim the reimbursement of any portion of such money from the Government.

2. His Excellency desires me to add, that if any bargain was made with Watson, the question will be as to the authority to make the bargain; and on this point I am to request your further report.

I have, &amp;c.,

W. ELYARD.

THE CHIEF COMMISSIONER  
OF CROWN LANDS.

No. 7.

THE CHIEF COMMISSIONER OF CROWN LANDS to THE COLONIAL SECRETARY.

Crown Lands Office,  
Sydney, 16 July, 1855.

SIR,

I have to acknowledge the receipt of your letter of the 11th instant, informing me that His Excellency the Governor General cannot admit the principle that a person laying out money without authority has a right to claim reimbursement of any portion of it from the Government, and desiring my further report in reference to the claim of the person named in the margin, to be repaid the cost incurred by him in repairing a Road at the Adelong Gold Field, as to whether any bargain had been made with him, and if so, the authority for making it.

Abraham  
Watson.



2. In returning Mr. Lockhart's letter, I have the honor to state that it does not appear that any bargain was made, as to the applicant, and that my remarks are directed to the Commissioner's proposition,—that a bargain should be made, involving an additional outlay, and requiring that individual to incur it before considering the merits of the claim already preferred by him.

3. I would, however, state, that the right of the applicant to claim compensation does not exist, and has not been asserted; but I deemed it right to recommend the application to the favorable consideration of His Excellency, under the Commissioner's statement, that the work performed had been of great public utility.

I have, &c.,  
 GEORGE BARNEY,  
 C. C. C. L.

THE HONORABLE  
 THE COLONIAL SECRETARY.

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No. 8.

THE COLONIAL SECRETARY to MR. ABRAHAM WATSON.

*Colonial Secretary's Office,  
 Sydney, 31 July, 1855.*

SIR,

In reply to your letter of the 28th February last, claiming compensation for the sum expended by you in the repair of a Road leading to the Adelong Gold Field, I am directed by the Governor General to inform you, that under the recommendation of the Chief Commissioner of Crown Lands, and the statement of Mr. Commissioner Lockhart, that the work performed has been of great public utility, His Excellency approves of the payment of the sum of £75 to you, and the Auditor General has been instructed to prepare a warrant in your favor accordingly.

I have, &c.,  
 W. ELYARD.

MR. ABRAHAM WATSON,  
 Adelong Creek.

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No. 9.

THE COLONIAL SECRETARY to THE CHIEF COMMISSIONER OF CROWN LANDS.

*Colonial Secretary's Office,  
 Sydney, 31 July, 1855.*

SIR,

With reference to your letter of the 16th instant, reporting further on the claim of Mr. Abraham Watson for compensation for the sum expended by him in the repair of a Road leading to the Adelong Gold Field, I am directed by the Governor General to inform you, that under your recommendation, and the statement of Mr. Commissioner Lockhart, that the work performed has been of great public utility, His Excellency approves of the payment of the sum of £75 to Mr. Watson, from the unexpended Balance of the sums allowed in former years for Roads in the Murrumbidgee District.

I have, &c.,  
 W. ELYARD.

THE CHIEF COMMISSIONER  
 OF CROWN LANDS.

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No. 10.

THE COLONIAL SECRETARY to THE ACTING AUDITOR GENERAL.

*Colonial Secretary's Office,  
 Sydney, 31 July, 1855.*

SIR,

Referring to your communication of the 27th March last, on a claim made by Mr. Abraham Watson for compensation for the sum expended by him in the repair of a road leading to the Adelong Gold Field, I am directed by the Governor General to inform you, that

that under the recommendation of the Chief Commissioner of Crown Lands, and the statement of Mr. Commissioner Lockhart, that the work performed has been of great public utility, His Excellency has approved of the payment of the sum of £75 to Mr. Watson, from the unexpended Balance of the sums allowed in former years for Roads in the Murrumbidgee District, as suggested in your Report above alluded to, and to request that you will prepare a warrant accordingly in favor of Mr. Watson.

I have, &c.,

W. ELYARD.

THE ACTING AUDITOR GENERAL.

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No. 11.

MR. ABRAHAM WATSON to THE COLONIAL TREASURER.

*Adelong Creek,*

14 November, 1855.

SIR,

I beg thankfully to acknowledge the receipt of your letter, by which I was informed that £75 would be paid to me for work laid out on the road to the Adelong Creek, from Sydney and Tumut.

Being aware of the peculiar interest which His Excellency the Governor General takes in the improvement of the Roads of the Colony, and believing that a fund exists from which the amount can be paid, I now humbly request that I may be paid my actual total outlay on this road, which is £200, over and above the £75 which I have already received. My reason for making this request is, that the work which I first did, and payment for which I now report, was not a complete work, and Mr. Lockhart, the Commissioner here, kept urging me on to do more, and would not recommend any payment to me, unless the Road over the mountain was complete and perfect. I now challenge any inspection. The road has already opened the way for fresh Stores and Inns, and I can safely say that the money so laid out by me has been already returned to the Government by the facility of intercourse. The new Road is becoming used even by the settlers. I charge the actual sum laid out by me, and I am sure had this been done by contract, it would not have been done for less than £1,000. I therefore pray this public benefit may be replaced to me by an order, to pay me the sum of £200 out of the road money, beyond the boundaries of the Colony.

I have, &c.,

ABRAHAM WATSON.

THE HONORABLE

THE COLONIAL TREASURER.

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No. 12.

THE COLONIAL SECRETARY to MR. ABRAHAM WATSON.

*Colonial Secretary's Office,*

*Sydney, 26 November, 1855.*

SIR,

With reference to your letter dated the 14th instant, addressed to the Colonial Treasurer, requesting to be allowed the sum of £200 in addition to the sum of £75 already granted to you, on account of work executed by you on the Road leading to Adelong Creek, from Sydney and Tumut,—I am directed to inform you, that His Excellency the Governor General cannot allow such charges as these, and that you have been paid a fair sum for the work executed by you on the Road in question.

I have, &c.,

W. ELYARD.

MR. ABRAHAM WATSON,

Adelong Creek.

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No.

## No. 13.

MR. ABRAHAM WATSON to THE COLONIAL SECRETARY.

*Adelong Creek,*

6 December, 1855.

SIR,

I do myself the honor to acknowledge the receipt of your letter of the 26th November, 1855, No. 1447, in which you inform me that the sum of £200, asked for by me in addition to £75, allowed for a repair on the Road leading to Adelong Creek, cannot be authorised by His Excellency the Governor General.

In reply, I do myself the honor to draw your attention to the fact, that when the £75 was applied for as a part assistance, the propriety of making the payment was referred to the Local Commissioner, Mr. Lockhart.

He told me that he would hesitate in authorising payment of £75, because, although what was done was worth more than that sum, yet that the work would not stand long, for want of drains, and that the gradient at the commencement of the hill was too steep. He also stated that he would use his endeavours to get me paid in full. I did, therefore, increase my expenditure greatly, and I now feel sure that the work is of a most substantial nature. The £75 I consider may be fairly looked upon as an instalment only.

I would also draw your attention to the fact, that owing to the Road I have made, stores are taken out to all Murrumbidgee Diggings, with increased facility. These amount to many thousands of pounds yearly;—the population and consumption is rapidly increasing. I would further point out, that I did not repair a work, but cut a new one over a high mountain, and that by so doing I have benefited the District already in no slight degree, and have assisted materially in developing this great Gold Field, which is rapidly increasing. I may state, with confidence, that this Road, leading to all the Murrumbidgee Diggings, has already, directly or indirectly, repaid the Revenue more than I ask for reimbursement;—the direct gains being by Licenses, and the indirect by the sale of land, at Tumut, which receives all its value from this Road to the rich market of the Diggings and the duties on articles which these Diggings were able to consume by their great gains. I would respectfully request that the matter may be referred to some person or persons who will inspect the matter, and report from a local observation.

The fund from which I would respectfully ask for reimbursement is that for improvement of the Roads in this District, which I am told is yet far from expended.

I do myself the honor to forward a copy of the account of money actually expended.

I leave the matter, with confidence, to the consideration of His Excellency the Governor General, who is so desirous of encouraging the formation of Roads in the Colony.

I have, &amp;c.,

ABRAHAM WATSON.

THE HONORABLE

THE COLONIAL SECRETARY,

Sydney.

[Enclosure in No. 13.]

PARTICULARS of expenses incurred and paid for cutting the Road leading to the Murrumbidgee Diggings.

	£	s.	d.
Alfred Anderson, at work 42 days, at 10s. per day ... ..	21	0	0
Rations for do., six weeks, at 15s. per week... ..	4	10	0
Thomas Fletcher, at work 42 days, at 10s. per day ... ..	21	0	0
Rations for do., six weeks, at 15s. per week... ..	4	10	0
James Holt, at work 42 days, at 10s. per day ... ..	21	0	0
Rations for do., six weeks, at 15s. per week... ..	4	10	0
Benjamin Hart, 16 days, at 10s. per day ... ..	8	0	0
Rations for do., two weeks and two days, at 15s. per week... ..	1	14	2
Thomas Baxter, at work 35½ days, at 10s. per day ... ..	17	15	0

Rations

	£	s.	d.
Rations for do., five weeks, at 15s. per week ... ..	3	15	0
Robert Pigram, at work 28 days, at 10s. per day ... ..	14	0	0
Rations for do., four weeks, at 15s. per week ... ..	3	0	0
Thomas Whiting, at work 21 days, at 10s. per day ... ..	10	10	0
Rations for do., three weeks, at 15s. per week ... ..	2	5	0
Samuel Birchfield, 60 days, at 10s. per day... ..	30	0	0
Rations for do., eight weeks and four days, at 15s. per week	6	8	7
James Miller, 60 days, at 10s. per day... ..	30	0	0
Rations for do., eight weeks and four days, at 15s. per week	6	8	7
David Baily, 28 days, at 10s. per day ... ..	14	0	0
Rations for do., four weeks, at 15s. per week ... ..	3	0	0
Joseph Allen, 16 days, at 10s. per day ... ..	8	0	0
Rations for do., two weeks and two days, at 15s. per week...	1	14	2
Edward Walker, at work 8 days, at 10s. per day ... ..	4	0	0
Rations for do., one week and one day, at 15s. per week ...	0	17	1
Samuel Wilson, at work 28 days, at 10s. per day ... ..	14	0	0
Rations for do., four weeks, at 15s. per week ... ..	3	0	0
Tools, and repairing of same... ..	14	10	0
	<u>£273</u>	<u>7</u>	<u>7</u>

## No. 14.

THE COLONIAL SECRETARY to MR. ABRAHAM WATSON.

*Colonial Secretary's Office,**Sydney, 24 December, 1855.*

SIR,

Having laid before the Governor General your further letter of the 6th instant, respecting your claim for compensation for making a Road to Adelong Creek, I am directed by His Excellency to inform you, that no further reimbursement than that which has already been allowed can be authorized.

I am, &amp;c.,

W. ELYARD.

MR. ABRAHAM WATSON,  
Adelong Creek.

## No. 15.

MR. ABRAHAM WATSON to THE SECRETARY FOR LAND AND PUBLIC WORKS.

*Tumut, 15 October, 1856.*

SIR,

I do myself the honor to trouble you with the following statement, under the hope that as Member for this important district, and as being a matter more immediately connected with the office you at present hold under the Government, you will be pleased to lay the same before the Honorable House.

In the year 1855, I was induced, from the very great difficulty of ingress to and exit from the Adelong Diggings, to cut a road across the Big Hill, being assured by the Local Gold Commissioner that I should be paid for my labour and expenses as the work progressed. I applied to the Government for the outlay which had then devolved on me, amounting to £75. This claim was referred to Mr. Lockhart, the Commissioner, who expressed a wish that as the work was by no means complete, and would entail a considerably greater expenditure before it could be so, that I would forego any claim for a moiety of the probable expenditure until the work should be perfected.

The amount of £75 was however paid on the work being completed and inspected by two valuers appointed for that purpose; they decided that the value thereof was £200 in addition to the £75 already allowed, and I accordingly furnished my claim for that amount to the Government. It met, however, a decided refusal; I then applied to Mr. Lockhart, who dictated a letter for me on the subject, the original of which I have now the honor to enclose. I furnished Mr. Lockhart with a detailed statement of the actual expenses incurred and paid by me, amounting to the extent of my demand, my object being the improvement of the District, and the better development of the Gold Fields, without any desire or wish

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for profit or emolument beyond the actual outlay. This letter met no better fate than its predecessor. The original draft will fully put you in possession of the nature of my claim, as well as the feeling of the Local Commissioner on the subject. When you and your honorable colleague, Mr. McLeay, last visited Tumut, the latter gentleman personally inspected the Road, and then said that should his services be required, he would freely give them to forward my claim, concurring as he did in its justice. I am sure you, a gentleman so long resident in the district, and so well acquainted with the *locale*, will, I feel convinced, at once see the injustice of negating a demand for works attended with such general utility; and without trespassing further on your valuable time, I shall leave the matter in the hands of yourself and your worthy coadjutor, under the confidence that it will meet with the justice to which it is entitled.

I have, &c.,  
ABRAHAM WATSON.

THE HONORABLE  
JOHN HAY, Esq., M.L.A.,  
&c., &c.,  
Sydney.

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No. 16.

THE SECRETARY FOR LAND AND PUBLIC WORKS to J. B. SHARP, Esq., J.P.  
M. 44. *Department of Land and Public Works,*  
*Sydney, 1 December, 1856.*

SIR,

In transmitting to you the accompanying copy of Mr. Watson's statement of labor alleged to have been paid for by him in the construction of the Road over the Windowee Gap, I am directed by the Secretary for Land and Public Works to request that you will have the goodness, if convenient for you to do so, in conjunction with Mr. F. W. Vyner, of Tumut, to visit and inspect the Road in question, and furnish this department with information as to the fair value of the work performed, taking into account its usefulness as a means of communication, and the probable cost, at the ordinary rate of labor. See No. 15.

2. I am to add that a similar letter has been addressed to Mr. F. W. Vyner.

I have, &c.,  
MICL. FITZPATRICK.

J. B. SHARP, Esq., J.P.,  
Tumut.

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No. 17.

THE SECRETARY FOR LAND AND PUBLIC WORKS to F. W. VYNER, Esq., J.P.  
*Department of Land and Public Works,*  
*Sydney, 1 December, 1856.*

SIR,

In transmitting to you the accompanying copy of Mr. Watson's statement of labor alleged to have been paid for by him in the construction of the road over the Windowee Gap, I am directed by the Secretary for Land and Public Works to request that you will have the goodness, if convenient for you to do so, in conjunction with Mr. J. B. Sharp, of Tumut, to visit and inspect the Road in question, and furnish this department with information as to the fair value of the work performed, taking into account its usefulness as a means of communication, and the probable cost, at the ordinary rate of labor.

2. I am to add that a similar letter has been addressed to Mr. J. B. Sharp.

I have, &c.,  
MICL. FITZPATRICK.

F. W. VYNER, Esq., J.P.,  
Tumut.

## No. 18.

MESSRS. F. W. VYNER AND J. B. SHARP to THE SECRETARY FOR LAND AND PUBLIC WORKS.

*Green Hills, 11 December, 1856.*

SIR,

In reply to your letters to us of the 1st December, requesting that we would visit the Road constructed by Mr. Abraham Watson over the Windowee Gap, we do ourselves the honor to state, that we have inspected the Road in question, and beg to forward you the following Report thereon.

The labor performed by Mr. Watson is a cutting on a sideling, 700 yards in length, 4 yards in breadth, and on the upper side of an average depth of about  $2\frac{1}{2}$  feet.

We are of opinion that the cutting for the first 150 yards on the Tumut side was perfectly unnecessary, as there is a good natural road just below it, far superior to the made Road, as evinced by the teams in all cases preferring the former.

The road constructed by Mr. Watson is at present in an almost impassable state from water courses, caused by the winter rains, and must continue to be so in wet weather, unless provided against by efficient drainage, of which at present there is a complete absence. We are further of opinion that the direction of the Road was injudiciously selected, and the work performed upon it, on the whole, of very little public advantage.

We do not wish to call in question the truth of Mr. Watson's statement, with regard to the amount he has expended on the Road, but we feel it our duty to state, that in our opinion a far better road might have been made for one-half the sum he claims.

We have, &c.,

F. W. VYNER.

J. B. SHARP.

THE HONORABLE THE SECRETARY  
FOR LAND AND PUBLIC WORKS.

## No. 19.

THE SECRETARY FOR LAND AND PUBLIC WORKS to MR. ABRAHAM WATSON.

56-790

*Department of Land and Public Works,  
Sydney, 22 December, 1856.*

SIR,

With reference to previous correspondence on the subject of your alleged claim on the Government for repairs to the Road to Adelong Creek, I am directed to inform you, that the Secretary for Land and Public Works having taken the best means at his disposal for ascertaining the value to the public of the Road constructed by you at that place, by calling upon two of the Magistrates of the Tumut Bench for their Report upon it, regrets that he cannot, with due regard to public interests, recommend any further payment to be made to you out of the Revenue, on account of any expenditure by you in the formation of this Road.

I have, &c.,

MICHL. FITZPATRICK.

MR. ABRAHAM WATSON,  
Tumut.

1856.

NEW SOUTH WALES.

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**ROADS AND BRIDGES IN THE COUNTY OF NORTHUMBERLAND.**

(AMOUNT OF MONEY APPROPRIATED FOR REPAIRS.)

---

*Ordered by the Legislative Assembly to be Printed, 10 December, 1856.*

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RETURN to an *Order* of the Honorable the Legislative Assembly of  
New South Wales, dated 6 June, 1856, for—

“(1.) A Return of all sums of money paid to the Wardens of  
“ the several Districts in the County of Northumberland, with  
“ the exception of those in which the District Councils are  
“ still in operation, to be expended in the repairs of Roads and  
“ Bridges in those Districts within the last three years.

“(2.) The names of the several Wardens and those of the  
“ parties associated with each Warden in the expenditure of  
“ said several sums of money; also the dates when such sums  
“ were paid to the Wardens respectively.”

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A RETURN of all Sums of Money paid to the Wardens of the Several Districts in the County of Northumberland, with the exception of those in which the District Councils are still in operation, to be expended in the repair of Roads and Bridges in those Districts within the last three years; the names of the several Wardens entrusted with the expenditure of the same, and the dates when such sums were paid to the said Wardens respectively.

TO WHOM ISSUED.	FOR WHAT SERVICE.	DATE OF PAYMENT.	AMOUNT PAID IN.		
			1853.	1854.	1855.
			£ s. d.	£ s. d.	£ s. d.
C. Simpson, Warden, Newcastle.....	Repairs to Iron Bark Bridge .....	7 March .....	50 0 0	.....	.....
		18 April.....	150 0 0	.....	.....
	" Road from Newcastle to Maitland .....	30 May .....	63 0 0	.....	.....
		12 January .....	.....	.....	.....
	" Road from Newcastle to Maitland .....	11 August .....	.....	63 0 0	.....
J. C. S. M'Douall, Warden, Patrick's Plains.....	Repairs to Road from Morpeth to Singleton.....	29 August .....	100 0 0	.....	.....
		6 May .....	.....	350 0 0	.....
	" Singleton to Muswellbrook.....	10 June .....	.....	375 0 0	.....
	" Morpeth to Singleton.....	10 July .....	.....	250 0 0	.....
	" Singleton to Muswellbrook.....	10 July .....	.....	375 0 0	.....
" Singleton to Jerry's Plains. ....	23 November .....	.....	168 0 0	.....	
John Moore, Warden, Brisbane Water .....	Repairs to Road from Gosford to Mangrove Creek .....	2 April.....	20 0 0	.....	.....
	" Roads in the District of Brisbane Water .....	1 October.....	.....	.....	100 0 0
	" Road over Broken Back Range .....	20 October.....	.....	.....	200 0 0
Henry Croudace .....	Repairs to Road from Maitland to Wollombi .....	11 March .....	45 5 0	.....	.....
		22 September .....	318 1 5	.....	.....
		1 November .....	.....	13 1 5	.....
		9 July .....	.....	.....	24 10 0
		Total.....£	746 6 5	1,594 1 5	324 10 0

Audit Office, Sydney, New South Wales,  
13 November, 1856.

W. C. MAYNE,  
Auditor General.



1856.

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NEW SOUTH WALES.

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## ROADS AND BRIDGES.

(MONEYS APPROPRIATED FOR REPAIRS AND CONSTRUCTION OF.)

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*Ordered by the Legislative Assembly to be Printed, 25 November, 1856.*

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RETURN to an *Order* of the Honorable the Legislative Assembly, dated 19 August, 1856, for—

“ (1.) A Return of all Sums of Money appropriated for the  
“ Construction or Repairs of Roads and Bridges in the several  
“ Districts of the Colony, from the 1st January, 1850, to the  
“ 1st July, 1856.

“ (2.) The names of the different Wardens, Road Trusts, or other  
“ persons entrusted with the Expenditure of the said several  
“ Sums of Money ; and the names of the different districts and  
“ places in each, on which such Moneys have been expended.

“ (3.) The Balance of any Moneys unappropriated still in the  
“ hands of the Government, and not applied to such purposes.”

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## ROADS AND

A RETURN of all Sums of Money appropriated for the Construction or Repair of Roads and Bridges in the Wards, Road Trusts, or other persons entrusted with the Expenditure of the same; the been expended; and the Balance of the same still in the

PARTICULARS OF APPROPRIATIONS.			TOTAL.
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.	
Roads on which Tolls have been established, 1850	Emu Ferry .. .. .	447 17 3	
	Seventeen-Mile-Hollow Toll Gate .. .	297 0 0	
	Wiseman's Ferry .. .. .	5 0 0	
	Road from Emu Plains to Weatherboard ..	400 0 0	
	Bridges between Campbelltown, Picton, } and Appin .. .. .	100 0 0	
	Turnpike Roads .. .. .	17 12 0	
	Toll House at Windsor .. .. .	83 7 7	
	Gates at the Cook's River Dam .. .	94 2 9	
	Amount Undistributed .. .. .	55 0 5	1,500 0 0
	Orange to Wellington .. .. .	50 0 0	
	Maitland to Morpeth .. .. .	200 0 0	
Roads within the Settled Districts, 1850	District of Newcastle .. .. .	100 0 0	
	Menangle Road .. .. .	100 0 0	
	Districts of Camden and Picton .. .	150 0 0	
	District of Mudgee .. .. .	100 0 0	
	Wollombi to Maitland .. .. .	50 0 0	
	Brisbane to Ipswich .. .. .	50 0 0	
	District of Goulburn .. .. .	150 0 0	
	Singleton to Muswellbrook .. .. .	100 0 0	
	Temporary Causeway near Bathurst .. .	11 10 0	
	Bridge at Bathurst .. .. .	50 0 0	
	St. Leonard's, North Shore .. .. .	100 0 0	
	District of Yass .. .. .	150 0 0	
	Maitland to Brisbane Water .. .. .	25 0 0	
	District of Carcoar .. .. .	150 0 0	
	South Head Road .. .. .	250 0 0	
	Peat's Ferry to Gosford and Maitland ..	100 0 0	
	Breakfast Creek Bridge .. .. .	100 0 0	
	Windsor Pant to Wilberforce .. .. .	75 0 0	
	Campbelltown to Cowpasture .. .. .	50 0 0	
	Bridge over Fig-tree Creek at Illawarra ..	100 0 0	
	Wollongong to Appin .. .. .	150 0 0	
	District of Wollombi .. .. .	50 0 0	
	District of Cassilis .. .. .	100 0 0	
	District of Paterson .. .. .	100 0 0	
	Road to Bedlam Ferry .. .. .	50 0 0	
	Wallis' Creek Bridge, Maitland .. .. .	20 0 0	
	Hartley to Mudgee .. .. .	150 0 0	
Parramatta to Bedlam Ferry .. .. .	50 0 0		
Bridge at Ipswich .. .. .	50 0 0		
Bridge at Darling Downs .. .. .	50 0 0		
Amount Undistributed .. .. .	18 10 0	3,000 0 0	
Roads beyond the Settled Districts, 1850.	District of Warialda .. .. .	100 0 0	
	District of Armidale .. .. .	100 0 0	
	District of Gundagai .. .. .	200 0 0	
	District of Liverpool Plains .. .. .	200 0 0	
	Carried forward .. .. . £	600 0 0	
	Carried forward .. .. . £	.. .. .	4,500 0 0

## BRIDGES.

several Districts of the Colony, from the 1st January, 1850, to the 30th June, 1856; the Names of the different Names of the different Districts and Places in each, on which such sums of money have hands of the Government not applied to such purposes.

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
John Cunningham .. .. .	16 July, 1850	12 0 0	} 447 17 3		
Penrith Road Trust .. .. .	17 Sept., 1850	400 0 0			
Do. .. .. .	16 July, 1851	35 17 3	} 297 0 0		
John Cunningham .. .. .	5 Aug., 1850	297 0 0			
H. Warmsley .. .. .	12 Dec., 1850	5 0 0	} 400 0 0		
Cook Road Committee .. .. .	30 May, 1850	400 0 0			
J. Graham .. .. .	27 Feb., 1850	100 0 0	} 17 12 0		
Sir T. L. Mitchell, Surveyor General	11 Mar., 1850	17 12 0			
M. M'Quade, Warden at Windsor ..	10 July, 1850	83 7 7	} 83 7 7		
Thomas Woolley .. .. .	31 Dec., 1850	1 0 5			
Sutton and Simmons .. .. .	24 Jan., 1851	88 16 4	} 94 2 9		
E. T. Blackett, Colonial Architect ..	17 April, 1851	3 2 6			
		1 3 6			
				55 0 5	
			1,444 19 7	55 0 5	.. .. .
Bench of Magistrates at Orange ..	8 Aug., 1850	25 0 0	} 50 0 0		
	6 Feb., 1851	25 0 0			
	25 May, 1850	50 0 0	} 200 0 0		
E. C. Close, Warden, Maitland ..	4 June, 1850	50 0 0			
	5 July, 1850	50 0 0	} 100 0 0		
	5 Aug., 1850	30 0 0			
	3 Feb., 1851	20 0 0	} 100 0 0		
J. E. Stacey, Warden at Newcastle..	7 Aug., 1850	50 0 0			
	5 Feb., 1851	50 0 0	} 100 0 0		
Bench of Magistrates at Picton ..	28 Aug., 1850	100 0 0			
W. Macarthur, Warden, Camden ..	8 July, 1850	100 0 0	} 150 0 0		
	12 Sept., 1850	50 0 0			
James Walker, Warden, Mudgee ..	26 June, 1850	100 0 0	} 100 0 0		
W. A. Rodd .. .. .	25 Oct., 1850	50 0 0			
{ J. C. Wickham, Government Resident, Moreton Bay .. .. .	11 Nov., 1850	50 0 0	} 150 0 0		
W. P. Faithfull, Warden, Goulburn	4 Nov., 1850	150 0 0			
J. C. S. M'Douall, Warden, Patrick's Plains .. .. .	1 June, 1850	50 0 0	} 100 0 0		
	17 Aug., 1850	50 0 0			
H. Blunden .. .. .	13 July, 1850	11 10 0	} 50 0 0		
	24 Aug., 1850	50 0 0			
Road Committee .. .. .	18 May, 1850	100 0 0	} 100 0 0		
H. O'Brien, Warden at Yass ..	22 May, 1850	75 0 0			
W. Knox Child, Warden, Maitland..	18 Sept., 1850	75 0 0	} 25 0 0		
	25 May, 1850	25 0 0			
Bench of Magistrates, Carcoar ..	28 May, 1850	75 0 0	} 150 0 0		
	21 Nov., 1850	75 0 0			
Road Trust, South Head .. .. .	3 April, 1850	250 0 0	} 250 0 0		
John Moore, Warden, Brisbane Water	30 Aug., 1850	40 0 0			
{ J. C. Wickham, Government Resident, Moreton Bay .. .. .	12 Nov., 1850	60 0 0	} 100 0 0		
	16 Sept., 1850	100 0 0			
M. Fitzgerald .. .. .	16 July, 1850	31 10 0	} 75 0 0		
	13 Nov., 1850	43 10 0			
W. Howe, junior .. .. .	10 Sept., 1850	50 0 0	} 50 0 0		
A. Osborne, Warden at Illawarra ..	4 Sept., 1850	50 0 0			
	24 Mar., 1851	50 0 0	} 100 0 0		
A. Osborne, Warden at Illawarra ..	10 Aug., 1851	75 0 0			
	24 Mar., 1851	75 0 0	} 50 0 0		
W. A. Rodd .. .. .	20 Mar., 1851	50 0 0			
E. Hamilton, Warden at Cassilis ..	27 May, 1851	100 0 0	} 100 0 0		
J. H. Boughton, Warden, Paterson	14 Sept., 1852	100 0 0			
B. C. Rodd .. .. .	12 June, 1850	50 0 0	} 50 0 0		
W. Knox Child, Warden, Maitland	28 Jan., 1854	20 0 0			
				150 0 0	
				50 0 0	
				50 0 0	
				50 0 0	
				18 10 0	
			2,681 10 0	318 10 0	.. .. .
Bench of Magistrates, Warialda ..	28 Dec., 1850	50 0 0	} 100 0 0		
	19 Feb., 1851	50 0 0			
Bench of Magistrates, Armidale ..	30 Aug., 1850	100 0 0	} 100 0 0	170 0 0	
Bench of Magistrates, Gundagai ..	28 Sept., 1850	30 0 0			
	16 July, 1850	50 0 0	} 200 0 0		
Bench of Magistrates, Liverpool Plains.	16 Sept., 1850	100 0 0			
	18 Dec., 1850	50 0 0			
Carried forward .. .. .			430 0 0	170 0 0	.. .. .
Carried forward.. .. .			4,556 9 7	373 10 5	.. .. .

## ROADS AND BRIDGES.

PARTICULARS OF APPROPRIATIONS.			TOTAL.
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.	
	Brought forward .. .. .	.. .. .	4,500 0 0
	Brought forward .. .. .	600 0 0	
Roads beyond the Settled Districts, 1850 .	Bridge over Adelong Creek .. .. .	35 0 0	
	District of Grafton .. .. .	100 0 0	
	District of Albury .. .. .	200 0 0	
	District of Warwick .. .. .	100 0 0	
	District of Drayton .. .. .	100 0 0	
	Warland's Range and Page's Gap .. .. .	100 0 0	
	District of Molong .. .. .	50 0 0	
	District of Eden .. .. .	100 0 0	
	Bridge at Gundagai .. .. .	30 0 0	
	Bridge at Hillas River .. .. .	30 0 0	
	Amount undistributed .. .. .	55 0 0	1,500 0 0
Roads on which Tolls have been established 1851.. .. .	Blackman's Point Ferry .. .. .	20 0 0	
	Emu Ferry .. .. .	938 19 3	
	Hinton Ferry .. .. .	40 0 0	
	Broughton's Waterhole .. .. .	365 0 0	
	Cook's River Dam .. .. .	0 9 6	
	Amount undistributed .. .. .	135 11 3	1,500 0 0
Roads within the Settled Districts, 1851..	Campbelltown to Cowpasture .. .. .	10 0 0	
	Vale Creek Bridge, Bathurst .. .. .	88 0 0	
	Erecting Yass Bridge .. .. .	200 0 0	
	District of Camden .. .. .	150 0 0	
	District of Carcoar .. .. .	100 0 0	
	Maitland to Brisbane Water .. .. .	25 0 0	
	Berrima to Paddy's River .. .. .	150 0 0	
	Maitland to Newcastle .. .. .	15 0 0	
	District of Goulburn .. .. .	100 0 0	
	District of Cassilis .. .. .	80 0 0	
	District of Newcastle .. .. .	80 0 0	
	District of Patrick's Plains .. .. .	80 0 0	
	Hartley to Mudgee .. .. .	50 0 0	
	Muswellbrook to Liverpool Plains .. .. .	50 0 0	
	District of Windsor .. .. .	50 0 0	
	District of Yass .. .. .	80 0 0	
	District of Moreton Bay .. .. .	300 0 0	
	District of Bathurst .. .. .	300 0 0	
	Bridge, West Maitland .. .. .	25 0 0	
	Illawarra to Appin .. .. .	100 0 0	
	Orange to Wellington .. .. .	100 0 0	
	District of Paterson .. .. .	80 0 0	
	District of Brisbane Water .. .. .	50 0 0	
	Menangle Ford to Picton .. .. .	50 0 0	
	Southern side of Razorback .. .. .	100 0 0	
	Mudgee to Hartley .. .. .	50 0 0	
	Wollongong to Macquarie River .. .. .	100 0 0	
	Bedlam Ferry Road .. .. .	25 0 0	
	Parramatta to Bedlam Ferry .. .. .	25 0 0	
	South Head Road to Watson's Bay .. .. .	200 0 0	
	Gosford to Mangrove Creek .. .. .	20 0 0	
	District of Scone .. .. .	80 0 0	
Seaham to Raymond Terrace, and Hinton to Nelson's Plains .. .. .	80 0 0		
	Amount undistributed .. .. .	7 0 0	3,000 0 0
Roads beyond the Settled Districts, 1851.	District of Auckland .. .. .	100 0 0	
	District of Drayton .. .. .	100 0 0	
	District of Eden .. .. .	100 0 0	
	District of Armidale .. .. .	100 0 0	
	District of Liverpool Plains .. .. .	100 0 0	
	District of Binalong .. .. .	100 0 0	
	District of Grafton .. .. .	100 0 0	
	District of Gayndah .. .. .	100 0 0	
	District of Warwick .. .. .	100 0 0	
	District of Warialda .. .. .	100 0 0	
	District of Albury .. .. .	100 0 0	
	District of Cooma .. .. .	100 0 0	
	District of Bombala .. .. .	100 0 0	
District of Gundagai .. .. .	100 0 0		
Warland's Range and Page's Gap .. .. .	100 0 0	1,500 0 0	
	Carried forward .. .. .	.. .. .	£ 12,000 0 0

## ROADS AND BRIDGES.

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .				373 10 5	.. . . .
Brought forward .. .. .			430 0 0	170 0 0	
W. Roberts and R. Thomas .. .. .	13 Mar., 1851	25 0 0	35 0 0		
Bench of Magistrates, Grafton .. .. .	14 Mar., 1851	100 0 0	100 0 0	200 0 0	
Bench of Magistrates, Warwick .. .. .	9 Dec., 1851	100 0 0	100 0 0		
Bench of Magistrates, Drayton .. .. .	15 April, 1851	100 0 0	100 0 0		
Bench of Magistrates, Murrurundi .. .. .	28 April, 1851	100 0 0	100 0 0	50 0 0	
Bench of Magistrates, Eden .. .. .	19 May, 1851	100 0 0	100 0 0	30 0 0	
.. .. .				30 0 0	
.. .. .				55 0 0	
.. .. .					
.. .. .				965 0 0	535 0 0
.. .. .					.. . . .
R. Byers .. .. .	17 Feb., 1851	20 0 0	20 0 0		
F. Mitchell and Co. .. .. .	10 Aug., 1852	11 17 6			
J. Cunningham .. .. .	2 July, 1851	47 1 9			
.. .. .	2 Aug., 1851	250 0 0	938 19 3		
Cook Road Committee .. .. .	13 Nov., 1851	530 0 0			
Penrith Road Trust .. .. .	18 Dec., 1851	190 0 0			
R. Canvin .. .. .	27 Nov., 1851	40 0 0	40 0 0		
Road Trust, Hartley .. .. .	30 June, 1852	365 0 0	365 0 0		
Thomas Woolley .. .. .	21 June, 1852	0 9 6	0 9 6		
.. .. .				135 11 3	
.. .. .					
.. .. .				1,364 8 9	135 11 3
.. .. .					.. . . .
W. Howe, junior .. .. .	20 Jan., 1851	10 0 0	10 0 0		
J. T. Morisset .. .. .	12 Mar., 1851	88 0 0	88 0 0		
H. O'Brien, Warden, Yass .. .. .	27 May, 1851	200 0 0	200 0 0		
W. Macarthur, Warden, Camden .. .. .	6 Aug., 1851	150 0 0	150 0 0		
S. North, Police Magistrate, Carcoar .. .. .	19 Aug., 1851	50 0 0	50 0 0	50 0 0	
Road Trust, Maitland .. .. .	11 Sept., 1851	25 0 0	25 0 0		
Charles Throsby, Warden, Berrima .. .. .	19 Sept., 1851	150 0 0	150 0 0		
E. C. Close .. .. .	13 Nov., 1851	15 0 0	15 0 0		
W. P. Faithfull, Warden, Goulburn .. .. .	14 Oct., 1851	100 0 0	100 0 0		
E. Hamilton, Warden, Cassilis .. .. .	14 Oct., 1851	80 0 0	80 0 0		
J. E. Stacey, Warden, Newcastle .. .. .	6 Nov., 1851	80 0 0	80 0 0		
J. C. S. McDonall, Warden, Patrick's Plains .. .. .	10 Nov., 1851	80 0 0	80 0 0		
Bench of Magistrates, Hartley .. .. .	13 Nov., 1851	50 0 0	50 0 0		
Bench of Magistrates, Muswellbrook .. .. .	15 Nov., 1851	50 0 0	50 0 0		
William Bowman .. .. .	15 Nov., 1851	50 0 0	50 0 0		
H. O'Brien, Warden, Yass .. .. .	22 Nov., 1851	80 0 0	80 0 0		
J. C. Wickham, Govt. Resdt., Moreton Bay .. .. .	1 Dec., 1851	300 0 0	300 0 0		
J. S. Rodd, Warden, Bathurst .. .. .	2 Dec., 1851	300 0 0	300 0 0		
J. H. Crummer, Police Magistrate, Maitland .. .. .	2 Dec., 1851	25 0 0	25 0 0		
A. Osborne, Warden, Illawarra .. .. .	6 Mar., 1852	100 0 0	100 0 0		
Bench of Magistrates, Orange .. .. .	12 Jan., 1852	60 0 0	60 0 0	40 0 0	
J. H. Boughton, Warden, Paterson .. .. .	14 Sept., 1852	80 0 0	80 0 0		
John Moore, Warden, Brisbane Water .. .. .	11 Sept., 1852	50 0 0	50 0 0		
.. .. .	19 Jan., 1852	50 0 0	50 0 0		
W. C. Macarthur, Warden, Camden. {	19 Jan., 1852	100 0 0	100 0 0		
.. .. .				50 0 0	
.. .. .				100 0 0	
B. C. Rodd .. .. .	19 Nov., 1851	25 0 0	25 0 0	25 0 0	
South Head Road Trust .. .. .	29 April, 1851	200 0 0	200 0 0		
John Moore, Warden, Brisbane Water .. .. .	2 April, 1853	20 0 0	20 0 0	80 0 0	
.. .. .					
.. .. .				80 0 0	
.. .. .				7 0 0	
.. .. .					
.. .. .				2,568 0 0	432 0 0
.. .. .					.. . . .
Bench of Magistrates, Drayton .. .. .	4 Aug., 1852	100 0 0	100 0 0	100 0 0	
Bench of Magistrates, Eden .. .. .	25 Oct., 1851	37 0 0	37 0 0	63 0 0	
Bench of Magistrates, Armidale .. .. .	24 Sept., 1851	100 0 0	100 0 0		
Bench of Magistrates, Liverpool Plains {	22 Oct., 1851	50 0 0	100 0 0		
.. .. .	20 Dec., 1851	50 0 0			
Bench of Magistrates, Binalong .. .. .	11 Nov., 1851	50 0 0	50 0 0	50 0 0	
Bench of Magistrates, Clarence River {	13 Nov., 1851	50 0 0	100 0 0		
.. .. .	21 May, 1852	50 0 0			
M. C. O'Connell, Govt. Resdt. Port Curtis .. .. .	13 Nov., 1851	100 0 0	100 0 0		
Bench of Magistrates, Warwick .. .. .	9 Dec., 1851	100 0 0	100 0 0		
Bench of Magistrates, Warialda .. .. .	2 April, 1852	100 0 0	100 0 0		
Bench of Magistrates, Albury .. .. .	12 Aug., 1852	100 0 0	100 0 0		
Bench of Magistrates, Cooma .. .. .	10 Nov., 1852	15 0 0	15 0 0	85 0 0	
.. .. .				100 0 0	
.. .. .				100 0 0	
.. .. .				100 0 0	
.. .. .					
.. .. .				902 0 0	598 0 0
.. .. .					.. . . .
Carried forward .. .. .				5,799 8 9	2,244 1 8
.. .. .					.. . . .

PARTICULARS OF APPROPRIATIONS.			TOTAL.	
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.		
	Brought forward .. .. . £	.. .. .	12,000 0 0	
	Bedlam Ferry .. .. .	330 14 11		
	Wiseman's Ferry .. .. .	21 0 0		
	Blackman's Point Ferry .. .. .	7 15 0		
Roads, &c., on which Tolls have been established, 1852 . . . . .	Emu Ferry .. .. .	677 2 6		
	Hawkesbury River Ferry .. .. .	444 15 0		
	Campbelltown to Cowpasture .. .. .	20 0 0		
	Seventeen Mile Hollow Toll Gate .. .. .	350 0 0		
	Amount undistributed .. .. .	648 12 7	2,500 0 0	
Repair of the Leading Thoroughfares of the Colony:—				
Main Leading Thoroughfares within the Settled Districts, 1852.	Parramatta to Eastern Creek .. .. .	225 0 0		
	Emu Ferry to Eastern Creek .. .. .	275 0 0		
	Emu Ferry to Pulpit Hill .. .. .	750 0 0		
	Pulpit Hill to Cox's River .. .. .	550 0 0		
	Cox's River to Macquarie River .. .. .	800 0 0		
	Bathurst to Frederick's Valley .. .. .	182 0 0		
	Great Western Road, 1852.. . . .	Frederick's Valley to Wellington .. .. .	637 0 0	
		Bathurst to Carcoar .. .. .	210 0 0	
		Carcoar to Canowindra.. . . .	224 0 0	
		Bowenfels to Mudgee .. .. .	476 0 0	
		Parramatta to Windsor .. .. .	133 0 0	4,462 0 0
		Salt Pan Creek to Cross Roads .. .. .	275 0 0	
		Cross Roads to Cowpasture Bridge .. .. .	375 0 0	
		Cowpasture Bridge to Picton .. .. .	275 0 0	
		Picton to Berrima .. .. .	775 0 0	
		Berrima to Marulan .. .. .	450 0 0	
	Great Southern Road, 1852 .. . . .	Marulan to Goulburn .. .. .	700 0 0	
		Goulburn to Yass .. .. .	385 0 0	
		Goulburn to Braidwood .. .. .	210 0 0	
		Goulburn to Queanbeyan .. .. .	420 0 0	
	Marulan to Bungonia .. .. .	245 0 0		
	Bungonia to Braidwood .. .. .	210 0 0		
	Cross Roads to Campbelltown .. .. .	63 0 0		
	Campbelltown to Picton, by Menangle .. .. .	105 0 0		
	Campbelltown to Appin .. .. .	70 0 0		
	Carried forward .. .. . £	4,558 0 0		
	Carried forward .. .. .	.. .. . £	18,962 0 0	

## ROADS AND BRIDGES.

7

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .		£	5,799 8 9	2,244 1 8	.. .. .
Wm. Northwood .. .. .	3 Mar., 1852	15 0 0	} 330 14 11		
	21 April, 1852	250 0 0			
	1 June, 1852	41 7 2			
	24 Nov., 1852	20 0 0			
	11 Mar., 1853	2 7 9			
J. Gerrard .. .. .	21 Aug., 1852	2 0 0	} 21 0 0		
F. Milham .. .. .	7 June, 1852	21 0 0			
W. Moseley .. .. .	24 Feb., 1853	7 15 0	} 7 15 0		
W. Northwood .. .. .	16 Mar., 1852	70 0 0			
F. Mitchell, & Co. .. .. .	10 Aug., 1852	27 7 2	} 677 2 6		
Penrith Road Trust .. .. .	29 Sept., 1852	118 8 11			
	25 April, 1853	118 8 11			
Cook Road Committee .. .. .	29 Sept., 1852	322 17 6	} 444 15 0		
J. Peisley .. .. .	14 April, 1853	20 0 0			
W. Northwood .. .. .	30 Dec., 1852	400 0 0	} 444 15 0		
F. Mitchell, & Co. .. .. .	30 Dec., 1852	29 15 0			
J. Gerrard .. .. .	30 Dec., 1852	15 0 0	} 20 0 0		
W. Howe, junior .. .. .	2 Sept., 1853	20 0 0			
Cook Road Committee .. .. .	29 Sept., 1852	204 3 4	} 350 0 0		
	20 Oct., 1852	145 16 8			
				648 12 7	
			1,851 7 5	648 12 7	.. .. .
Parramatta Road Trust .. .. .	14 May, 1852	125 0 0	} 225 0 0		
	28 June, 1852	100 0 0			
Penrith Road Trust .. .. .	15 May, 1852	275 0 0	} 275 0 0		
Cook Road Committee .. .. .	15 May, 1852	375 0 0			
J. Walker, Warden at Hartley .. .. .	14 Sept., 1852	375 0 0	} 750 0 0		
J. S. Rodd, Warden, Bathurst .. .. .	12 May, 1853	550 0 0			
J. R. Richards, Warden, Bathurst .. .. .	6 July, 1852	400 0 0	} 800 0 0		
	2 Feb., 1853	200 0 0			
Bench of Magistrates at Orange .. .. .	25 June, 1853	200 0 0	} 170 0 0	12 0 0	
J. S. Rodd, Warden, Bathurst .. .. .	8 June, 1852	100 0 0			
Bench of Magistrates at Wellington .. .. .	30 July, 1852	70 0 0	} 637 0 0		
	12 Oct., 1852	200 0 0			
Bench of Magistrates at Orange .. .. .	12 Dec., 1853	213 0 0	} 174 0 0		
	13 Nov., 1852	50 0 0			
S. North, Police Magistrate, Carcoar .. .. .	28 Dec., 1852	174 0 0	} 210 0 0		
J. B. Richards, Warden, Bathurst .. .. .	2 June, 1852	50 0 0			
S. North, Police Magistrate, Carcoar .. .. .	17 Dec., 1852	62 0 0	} 224 0 0		
J. Walker, Warden, Hartley .. .. .	25 June, 1853	98 0 0			
Warden, Mudgee .. .. .	17 May, 1852	100 0 0	} 165 0 0	.. .. .	311 0 0
Parramatta Road Trust .. .. .	17 Sept., 1852	124 0 0			
Windsor Road Trust .. .. .	7 Jan., 1852	105 0 0	} 133 0 0		
	5 July, 1854	60 0 0			
	16 Aug., 1852	84 0 0	} 4,139 0 0	12 0 0	311 0 0
	7 Mar., 1853	49 0 0			
Liverpool Road Trust .. .. .	10 June, 1853	275 0 0	} 275 0 0		
Narrellan Road Trust .. .. .	2 Aug., 1852	375 0 0			
Bench of Magistrates at Picton .. .. .	19 July, 1852	25 0 0	} 275 0 0		
	27 Aug., 1852	25 0 0			
W. Macarthur, Warden, Camden .. .. .	12 Oct., 1852	37 10 0	} 775 0 0		
	28 Sept., 1852	60 0 0			
Bench of Magistrates, Picton .. .. .	2 Oct., 1852	127 10 0	} 450 0 0		
	9 June, 1852	100 0 0			
C. Throsby, Warden, Berrima .. .. .	27 Aug., 1852	50 0 0	} 700 0 0		
	12 Oct., 1852	112 10 0			
C. Throsby, Warden, Berrima .. .. .	1 July, 1852	200 0 0	} 450 0 0		
	22 Dec., 1852	200 0 0			
W. P. Faithfull, Warden, Goulburn .. .. .	1 June, 1853	112 10 0	} 700 0 0		
	1 June, 1853	187 10 0			
H. O'Brien, Warden, at Yass .. .. .	10 July, 1854	262 10 0	} 292 10 0	92 10 0	
W. P. Faithfull, Warden, Goulburn .. .. .	31 May, 1852	200 0 0			
Bench of Magistrates, Braidwood .. .. .	23 Nov., 1852	200 0 0	} 100 0 0	110 0 0	
W. P. Faithfull, Warden, Goulburn .. .. .	23 Nov., 1853	200 0 0			
W. P. Faithfull, Warden, Goulburn .. .. .	8 June, 1854	100 0 0	} 420 0 0		
J. F. Murray, Warden, Queanbeyan .. .. .	3 Aug., 1852	92 10 0			
W. P. Faithfull, Warden, Goulburn .. .. .	8 June, 1854	100 0 0	} 50 0 0	195 0 0	
Bench of Magistrates, Braidwood .. .. .	29 Sept., 1852	100 0 0			
Campbelltown Road Trust .. .. .	31 May, 1852	150 0 0	} 200 0 0	10 0 0	
	8 June, 1854	60 0 0			
Bench of Magistrates, Picton .. .. .	23 Aug., 1852	210 0 0	} 63 0 0		
	10 June, 1852	63 0 0			
Campbelltown Road Trust .. .. .	19 July, 1852	25 0 0	} 105 0 0		
Bench of Magistrates, Appin .. .. .	23 Aug., 1852	25 0 0			
	16 Oct., 1854	20 0 0	} 70 0 0		
	28 April, 1853	35 0 0			
	15 Sept., 1852	40 0 0	} 4,150 10 0	407 10 0	.. .. .
	29 Oct., 1853	30 0 0			
Carried forward .. .. .		£			
Carried forward .. .. .		£		2,904 14 3	311 0 0

## ROADS AND BRIDGES.

PARTICULARS OF APPROPRIATIONS.			TOTAL.	
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.		
	Brought forward . . . . .	.. .. .	18,962 0 0	
	Brought forward .. .. .	4,558 0 0		
Great Southern Road, 1852 .. .. .	Appin to Wollongong .. .. .	217 0 0		
	Wollongong to Dapto and Kiama .. .. .	98 0 0		
	Kiama to Shoalhaven .. .. .	119 0 0		
			4,992 0 0	
Main Leading Thoroughfares within the Settled Districts, 1852.	Morpeth to Singleton .. .. .	825 0 0		
	Singleton to Muswellbrook .. .. .	700 0 0		
	Muswellbrook to Scone .. .. .	425 0 0		
	Scone to Murrurrundi .. .. .	625 0 0		
	Murrurrundi to the Gap .. .. .	50 0 0		
	Great Northern Roads, 1852 .. .. .	Newcastle to Maitland .. .. .	126 0 0	
		Maitland to Paterson .. .. .	77 0 0	
		Paterson to Gresford .. .. .	91 0 0	
		Singleton to Jerry's Plains .. .. .	168 0 0	
		Jerry's Plains to Merton .. .. .	91 0 0	
		Merton to Merriwa .. .. .	245 0 0	
		Merriwa to Cassilis .. .. .	210 0 0	
		Chichester, Clarence Town, Dungog, and Seaham .. .. .	210 0 0	
		Ironbark Bridge .. .. .	200 0 0	
				4,043 0 0
Moreton Bay Roads, 1852 .. .. .	Brisbane to Ipswich .. .. .	675 0 0		
	Ipswich to the Gap .. .. .	1,500 0 0		
	Ipswich to Spicer's Peak .. .. .	315 0 0		
			2,490 0 0	
Main Leading Thoroughfares beyond the Settled Districts, 1852 .. .. .	District of Albury .. .. .	200 0 0		
	District of Armidale .. .. .	200 0 0		
	District of Binalong .. .. .	200 0 0		
	District of Bombala .. .. .	200 0 0		
	District of Cooma .. .. .	200 0 0		
	District of Casino .. .. .	200 0 0		
	District of Tumut or Deniliquin .. .. .	200 0 0		
	District of Drayton .. .. .	200 0 0		
	District of Dubbo .. .. .	200 0 0		
	District of Eden .. .. .	200 0 0		
	District of Euston or Balranald .. .. .	200 0 0		
	District of Gayndah .. .. .	200 0 0		
	District of Grafton .. .. .	200 0 0		
	District of Gundagai .. .. .	200 0 0		
	District of M'Leay River .. .. .	200 0 0		
	District of Molong .. .. .	200 0 0		
	District of Moulamein .. .. .	200 0 0		
	District of Tamworth .. .. .	200 0 0		
	District of Tenterfield .. .. .	200 0 0		
	District of Wagga Wagga .. .. .	200 0 0		
	District of Wambo (Surat & Myall Creek) .. .. .	200 0 0		
	District of Warialda .. .. .	200 0 0		
	District of Warwick .. .. .	200 0 0		
	District of Wee Waa .. .. .	200 0 0		
	District of Wellingrove .. .. .	200 0 0		
	District of Wide Bay .. .. .	200 0 0		
				5,200 0 0
	Carried forward .. .. .	.. .. .	35,687 0 0	



PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .		£ .. .. .	.....	2,904 14 3	311 0 0
Brought forward .. .. .		£ .. .. .	4,150 10 0	407 10 0	.....
A. Osborne, Warden, Illawarra ..	3 July, 1852	100 0 0	} 217 0 0		
Bench of Magistrates, Appin ..	30 Mar., 1853	103 0 0			
Bench of Magistrates, Kiama ..	7 Sept., 1855	14 0 0			
Bench of Magistrates, Shoalhaven ..	9 Aug., 1852	98 0 0			
	29 Oct., 1852	119 0 0	} 119 0 0		
			4,584 10 0	407 10 0	.....
Maitland Road Trust .. .. .	23 June, 1852	300 0 0	} 825 0 0		
J. C. S. McDouall, Warden, Patrick's Plains .. .. .	27 Oct., 1852	175 0 0			
	8 July, 1852	100 0 0	} 700 0 0		
J. C. S. McDouall, Warden, Patrick's Plains .. .. .	28 Aug., 1852	250 0 0			
Bench of Magistrates, Muswellbrook ..	10 July, 1854	375 0 0	} 300 0 0		125 0 0
Bench of Magistrates, Scone .. .. .	8 July, 1854	325 0 0			
Bench of Magistrates, Muswellbrook ..	19 Aug., 1852	100 0 0	} 225 0 0		400 0 0
Bench of Magistrates, Scone .. .. .	8 July, 1854	200 0 0			
Bench of Magistrates, Scone .. .. .	11 June, 1853	125 0 0	} 50 0 0		
Bench of Magistrates, Murrurundi ..	11 Nov., 1852	100 0 0			
Bench of Magistrates, Murrurundi ..	29 June, 1852	50 0 0	} 126 0 0		
W. Knox Child, Warden, Maitland ..	23 June, 1852	40 0 0			
C. Simpson, Warden, Newcastle ..	27 Oct., 1852	23 0 0	} 59 10 0	17 10 0	
W. Knox Child, Warden, Maitland ..	4 Oct., 1852	63 0 0			
	23 June, 1852	40 0 0	} 91 0 0		
	27 Oct., 1852	19 10 0			
J. C. S. McDouall, Warden, Patrick's Plains .. .. .	23 Nov., 1854	168 0 0	168 0 0	91 0 0	
Bench of Magistrates, Merriwa .. .. .	4 Aug., 1853	45 0 0	45 0 0	200 0 0	
				210 0 0	
Bench of Magistrates, Dungog .. .. .	8 Dec., 1853	210 0 0	210 0 0		
C. Simpson, Warden, Newcastle ..	7 Mar., 1853	50 0 0	} 200 0 0		
	18 April, 1853	150 0 0			
			2,908 10 0	609 10 0	525 0 0
J. C. Wickham, Government Resident, Moreton Bay .. .. .	14 June, 1853	136 19 3	} 474 9 3		200 10 9
R. Douglas and J. Fleming .. .. .	20 June, 1853	337 10 0			
C. G. Gray, Police Magistrate, Ipswich	25 May, 1853	325 0 0	} 1,500 0 0		
Bench of Magistrates, Drayton .. .. .	30 Sept., 1854	425 0 0			
Bench of Magistrates, Warwick .. .. .	26 Feb., 1853	325 0 0	} 210 0 0		105 0 0
	19 Oct., 1853	425 0 0			
	8 Dec., 1853	210 0 0	210 0 0		
			2,184 9 3		305 10 9
Bench of Magistrates, Albury .. .. .	30 July, 1852	8 0 0	} 58 0 0		142 0 0
Bench of Magistrates, Armidale .. .. .	1 April, 1853	50 0 0			
Bench of Magistrates, Binalong .. .. .	14 Sept., 1852	200 0 0	} 200 0 0		150 0 0
Bench of Magistrates, Bombala .. .. .	15 Nov., 1854	50 0 0			
Bench of Magistrates, Cooma .. .. .	31 Jan., 1854	200 0 0	} 200 0 0		200 0 0
	25 May, 1852	40 0 0			
Bench of Magistrates, Tumut .. .. .	22 Mar., 1855	160 0 0	} 200 0 0		200 0 0
Bench of Magistrates, Drayton .. .. .	3 May, 1854	200 0 0			
Bench of Magistrates, Eden .. .. .	4 Aug., 1852	200 0 0	} 200 0 0		200 0 0
	22 June, 1853	86 10 0			
Bench of Magistrates, Clarence River	1 Mar., 1854	113 10 0	} 200 0 0		200 0 0
Bench of Magistrates, Gundagai .. .. .	24 Aug., 1852	200 0 0			
Bench of Magistrates, M'Leay .. .. .	18 Oct., 1854	40 0 0	} 200 0 0		160 0 0
	16 Feb., 1853	57 10 0			
Bench of Magistrates, Molong .. .. .	3 Nov., 1852	25 0 0	} 100 0 0		100 0 0
	14 Dec., 1852	100 0 0			
Bench of Magistrates, Tamworth .. .. .	12 Nov., 1855	17 10 0	} 100 0 0		200 0 0
Bench of Magistrates, Tenterfield ..	17 July, 1852	50 0 0			
Bench of Magistrates, Wagga Wagga	20 Dec., 1852	50 0 0	} 200 0 0		200 0 0
	22 April, 1852	100 0 0			
	30 May, 1853	100 0 0	} 200 0 0		200 0 0
	1 Nov., 1855	200 0 0			
	6 June, 1854	100 0 0	} 200 0 0		200 0 0
	1 Feb., 1855	100 0 0			
					200 0 0
					200 0 0
					200 0 0
					200 0 0
Bench of Magistrates, Wellingrove ..	20 Oct., 1852	50 0 0	} 200 0 0		
Bench of Magistrates, Maryborough ..	30 Oct., 1852	150 0 0			
	21 Dec., 1852	200 0 0	200 0 0		
			2,848 0 0		2,352 0 0
Carried forward .. .. .		£ .. .. .	28,441 15 0	3,751 14 3	3,493 10 9

PARTICULARS OF APPROPRIATIONS.			TOTAL.	
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.		
	Brought forward .. .. .	£	35,687 0 0	
Roads Generally, 1852 .. .. .	{ Port Macquarie and Manning River .. .. .	3 10 0	13 0 0	
	{ Emu Ferry to Eastern Creek .. .. .	0 12 0		
	{ Maitland and Wollombi .. .. .	8 18 0		
Miscellaneous Roads, 1852.. .. .	{ Road over the Dam at Cook's River .. .. .	100 0 0	1,100 0 0	
	{ Cook's River and Mudbank Road .. .. .	300 0 0		
	{ South Head Road to Watson's Bay .. .. .	200 0 0		
	{ Wollombi to Maitland .. .. .	500 0 0		
Roads, &c., on which Tolls have been established, 1853 .. .. .	{ Bedlam Ferry .. .. .	32 17 0	2,500 0 0	
	{ Blackman's Point Ferry .. .. .	118 5 0		
	{ Emu Ferry .. .. .	2,033 15 5		
	{ Amount undistributed .. .. .	315 2 7		
Main Leading Thoroughfares within the Settled Districts, 1853.	{	Parramatta to Eastern Creek .. .. .	225 0 0	4,462 0 0
		Emu Ferry to Eastern Creek .. .. .	275 0 0	
		Emu Ferry to Pulpit Hill .. .. .	750 0 0	
		Pulpit Hill to Cox's River .. .. .	550 0 0	
		Cox's River to Macquarie River.. .. .	800 0 0	
		Bathurst to Frederick's Valley .. .. .	182 0 0	
		Frederick's Valley to Wellington .. .. .	637 0 0	
		Bathurst to Carcoar .. .. .	210 0 0	
		Carcoar to Canowindra .. .. .	224 0 0	
		Bowenfels to Mudgee .. .. .	476 0 0	
		Parramatta to Windsor. .. .. .	133 0 0	
		Salt Pan Creek to Cross Roads .. .. .	275 0 0	
		Cross Roads to Cowpasture Bridge .. .. .	375 0 0	
		Cowpasture Bridge to Picton .. .. .	275 0 0	
Picton to Berrima .. .. .	775 0 0			
Berrima to Marulan .. .. .	450 0 0			
Marulan to Goulburn .. .. .	700 0 0			
Great Southern Road, 1853 .. .. .	{	Goulburn to Yass .. .. .	385 0 0	4,992 0 0
		Goulburn to Braidwood .. .. .	210 0 0	
		Goulburn to Queanbeyan .. .. .	420 0 0	
		Marulan to Bungonia .. .. .	245 0 0	
		Bungonia to Braidwood .. .. .	210 0 0	
		Cross Roads to Campbelltown .. .. .	63 0 0	
		Campbelltown to Picton by Menangle .. .. .	105 0 0	
		Campbelltown to Appin .. .. .	70 0 0	
		Appin to Wollongong .. .. .	217 0 0	
		Wollongong to Dapto and Kiama .. .. .	98 0 0	
Kiama to Shoalhaven .. .. .	119 0 0			
	Carried forward .. .. .	£	48,754 0 0	

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .		£	28,441 15 0	3,751 15 3	3,493 10 0
F. Becke .. .. .	14 Feb., 1854	1 0 0	} 3 10 0		
Penrith Road Trust .. .. .	5 Feb., 1855	2 10 0			
H. Croudace .. .. .	4 April, 1854	0 12 0	} 0 12 0		
	22 Sept., 1854	8 6 5			
	9 July, 1855	0 11 7	} 8 18 0		
			13 0 0	.. .. .	.. .. .
Cook River Road Committee .. .. .	20 Nov., 1853	100 0 0	100 0 0		
Mudbank Road Committee .. .. .	16 Dec., 1853	300 0 0	300 0 0		
South Head Road Trust .. .. .	11 June, 1852	200 0 0	200 0 0		
W. Knox Child, Warden, Maitland .. .. .	21 May, 1853	145 0 0	} 500 0 0		
H. Croudace .. .. .	11 Mar., 1853	45 5 0			
	22 Sept., 1853	309 15 0	} 1,100 0 0	.. .. .	.. .. .
F. Mitchell and Co. .. .. .	28 April, 1853	32 0 0	} 32 17 0		
Kemp and Fairfax .. .. .	30 June, 1853	0 17 0			
F. Mitchell and Co. .. .. .	28 May, 1853	68 5 0	} 118 5 0		
D. Harriett .. .. .	3 Feb., 1854	50 0 0			
Penrith Road Trust .. .. .	12 Sept., 1853	200 0 0	} 675 0 0		
J. Cuthbert .. .. .	26 Nov., 1853	675 0 0			
	3 Feb., 1854	330 0 0	} 2,033 15 5		
M. Moriarty .. .. .	26 Nov., 1853	6 3 0			
Mitchell and Co. .. .. .	16 Jan., 1854	47 15 0	} 134 10 3		
Sutton and Simmonds .. .. .	19 May, 1854	134 10 3			
Cook Road Committee .. .. .	15 Nov., 1854	640 7 2	} 315 2 7	315 2 7	
			2,184 17 5	315 2 7	.. .. .
Parramatta Road Trust .. .. .	24 Aug., 1853	225 0 0	225 0 0		
Penrith Road Trust .. .. .	28 April, 1853	137 10 0	} 275 0 0		
	4 Aug., 1853	137 10 0			
Cook Road Committee .. .. .	28 April, 1853	375 0 0	} 750 0 0		
	27 Sept., 1853	375 0 0			
J. Walker, Warden, Hartley .. .. .	21 Nov., 1853	275 0 0	} 550 0 0		
J. R. Richards, Warden, Bathurst .. .. .	27 April, 1854	275 0 0			
H. Heathorn, Warden, Bathurst .. .. .	25 June, 1853	200 0 0	} 800 0 0		
	28 Feb., 1854	200 0 0			
Bench of Magistrates, Orange .. .. .	10 July, 1854	400 0 0	} 182 0 0		
H. Heathorn, Warden, Bathurst .. .. .	20 Sept., 1853	112 0 0			
	28 Feb., 1854	70 0 0		637 0 0	
S. North, Police Magistrate, Carcoar .. .. .	29 Nov., 1853	50 0 0	} 148 0 0	62 0 0	
H. Heathorn, Warden, Bathurst .. .. .	28 Feb., 1854	98 0 0			
S. North, Police Magistrate, Carcoar .. .. .	29 Nov., 1853	50 0 0	} 50 0 0	174 0 0	
Parramatta Road Trust .. .. .	25 Nov., 1853	84 0 0	} 133 0 0	.. .. .	476 0 0
Windsor Road Trust .. .. .	3 Nov., 1854	49 0 0			
			3,113 0 0	873 0 0	476 0 0
Liverpool Road Trust .. .. .	24 Aug., 1853	275 0 0	275 0 0		
Narellan Road Trust .. .. .	3 Mar., 1854	375 0 0	375 0 0		
W. Macarthur, Warden, Camden .. .. .	8 Sept., 1853	127 10 0	} 275 0 0		
	20 Sept., 1853	60 0 0			
Bench of Magistrates, Picton .. .. .	20 Sept., 1853	60 0 0	} 775 0 0		
	14 Oct., 1853	27 10 0			
Bench of Magistrates, Picton .. .. .	28 April, 1853	100 0 0	} 62 10 0		
	26 July, 1853	100 0 0			
C. Throsby, Warden, Berrima .. .. .	28 Oct., 1853	62 10 0	} 512 10 0		
C. Throsby, Warden, Berrima .. .. .	22 July, 1854	512 10 0			
	31 Oct., 1854	450 0 0	} 450 0 0		
W. P. Faithfull, Warden, Goulburn .. .. .	22 Mar., 1854	82 18 10			
	8 June, 1854	100 0 0	} 700 0 0		
	28 Dec., 1854	517 1 2			
H. O'Brien, Warden, at Yass .. .. .	12 April, 1853	192 10 0	} 192 10 0	192 10 0	
					210 0 0
W. P. Faithfull, Warden, Goulburn .. .. .	8 June, 1854	40 0 0	} 140 0 0	280 0 0	
	28 Dec., 1854	100 0 0			245 0 0
				210 0 0	
Campbelltown Road Trust .. .. .	9 Sept., 1853	63 0 0	63 0 0		
Campbelltown Road Trust .. .. .	9 Sept., 1853	35 0 0	} 105 0 0		
	16 Oct., 1854	15 0 0			
Bench of Magistrates, Picton .. .. .	6 Nov., 1855	55 0 0	} 70 0 0		
Bench of Magistrates, Appin .. .. .	10 Aug., 1854	70 0 0			
W. W. Jenkins, Warden, Illawarra .. .. .	12 Dec., 1853	100 0 0	} 114 0 0	103 0 0	
Bench of Magistrates, Appin .. .. .	7 Sept., 1855	14 0 0			
Bench of Magistrates, Kiama .. .. .	2 April, 1853	98 0 0	} 98 0 0		
Bench of Magistrates, Shoalhaven .. .. .	16 May, 1854	119 0 0			
			3,751 10 0	1,240 10 0	.. .. .
Carried forward .. .. .		£	38,604 2 5	6,180 7 10	3,969 0 0

PARTICULARS OF APPROPRIATIONS.			TOTAL.
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.	
	Brought forward .. .. .	.. .. .	48,754 0 0
Main Leading Thoroughfares within the Settled Districts, 1853.	Great Northern Road, 1853 .. .. .	Morpeth to Singleton .. .. .	825 0 0
		Singleton to Muswellbrook .. .. .	700 0 0
		Muswellbrook to Scone .. .. .	425 0 0
		Scone to Murrurundi .. .. .	625 0 0
		Murrurundi to the Gap .. .. .	50 0 0
		Newcastle to Maitland .. .. .	126 0 0
		Maitland to Paterson .. .. .	77 0 0
		Paterson to Gresford .. .. .	91 0 0
		Singleton to Jerry's Plains .. .. .	168 0 0
		Jerry's Plains to Merton .. .. .	91 0 0
		Merton to Merriwa .. .. .	245 0 0
		Merriwa to Cassilis .. .. .	210 0 0
		Chichester, Clarence Town, Dungog, and Seaham .. .. .	210 0 0
Main Leading Thoroughfares within the Settled Districts, 1853.	Moreton Bay Roads, 1853 .. .. .	Brisbane to Ipswich .. .. .	675 0 0
		Ipswich to the Gap .. .. .	1,500 0 0
		Ipswich to Spicer's Peak .. .. .	315 0 0
			2,490 0 0
Main Leading Thoroughfares beyond the Settled Districts, 1853.. .. .	District of Albury .. .. .	200 0 0	
	District of Armidale .. .. .	200 0 0	
	District of Binalong .. .. .	200 0 0	
	District of Bombala .. .. .	200 0 0	
	District of Casino .. .. .	200 0 0	
	District of Cooma .. .. .	200 0 0	
	District of Tumut .. .. .	200 0 0	
	District of Drayton .. .. .	200 0 0	
	District of Dubbo .. .. .	200 0 0	
	District of Eden .. .. .	200 0 0	
	Buston or Balranald .. .. .	200 0 0	
	District of Gayndah .. .. .	200 0 0	
	District of Grafton .. .. .	200 0 0	
	District of Gundagai .. .. .	200 0 0	
	District of M'Leay River .. .. .	200 0 0	
	District of Molong .. .. .	200 0 0	
	District of Moulamein .. .. .	200 0 0	
	District of Tamworth .. .. .	200 0 0	
	District of Tenterfield .. .. .	200 0 0	
	District of Wagga Wagga .. .. .	200 0 0	
	District of Wambo (Surat or Myall Creek) .. .. .	200 0 0	
	District of Warialda .. .. .	200 0 0	
	District of Warwick .. .. .	200 0 0	
	District of Wee Waa .. .. .	200 0 0	
	District of Wellingrove .. .. .	200 0 0	
	District of Wide Bay .. .. .	200 0 0	
Roads generally .. .. .	Maitland and Wollombi .. .. .	13 0 0	
			13 0 0
Miscellaneous Roads, 1853.. .. .	South Head Road to Watson's Bay .. .. .	750 0 0	
	Botany and Mudbank Road .. .. .	300 0 0	
	Raymond Terrace and Morpeth .. .. .	300 0 0	
	Bridges, Newcastle and Maitland Road .. .. .	300 0 0	
	Streets, Town of Ipswich .. .. .	100 0 0	
	Cowpasture Bridge .. .. .	300 0 0	
			2,050 0 0
	Carried forward .. .. .	.. .. .	62,350 0 0

ROADS AND BRIDGES.

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward . . . . .		£ 38,604 2 5		6,180 7 10	3,969 0 0
Maitland Road Trust . . . . .	2 May, 1853	200 0 0	825 0 0		
	7 June, 1853	275 0 0			
J. C. S. M'Douall, Warden, Patrick's Plains . . . . .	29 Aug., 1853	100 0 0	75 0 0		625 0 0
	10 July, 1854	250 0 0			
Bench of Magistrates, Muswellbrook	8 July, 1854	75 0 0	25 0 0		400 0 0
Bench of Magistrates, Muswellbrook	8 July, 1854	25 0 0			
W. Knox Child, Warden, Maitland . . . . .	5 April, 1853	63 0 0	126 0 0		625 0 0
C. Simpson, Warden, Newcastle	30 May, 1853	63 0 0			
W. Knox Child, Warden, Maitland . . . . .	5 April, 1853	59 10 0	59 10 0	17 10 0	50 0 0
				91 0 0	
				168 0 0	
Bench of Magistrates, Merriwa . . . . .	4 Aug., 1853	45 0 0	45 0 0	91 0 0	
				200 0 0	
				210 0 0	
Road Committee . . . . .	16 Nov., 1853	210 0 0	210 0 0		
			1,365 10 0	777 10 0	1,700 0 0
C. G. Gray, Police Magistrate, Ipswich . . . . .	30 Sept., 1854	337 10 0	337 10 0		337 10 0
Bench of Magistrates, Drayton . . . . .	12 Sept., 1854	750 0 0	1,500 0 0		
C. G. Gray, Police Magistrate, Ipswich . . . . .	8 May, 1855	750 0 0			
Bench of Magistrates, Warwick . . . . .	11 May, 1853	210 0 0	210 0 0		105 0 0
			2,047 10 0		442 10 0
Bench of Magistrates, Armidale . . . . .	7 June, 1853	200 0 0	200 0 0		200 0 0
Bench of Magistrates, Bombala . . . . .	31 Jan., 1854	200 0 0	200 0 0		200 0 0
Bench of Magistrates, Cooma . . . . .	22 Mar., 1855	175 14 2	200 0 0		200 0 0
	15 Aug., 1855	24 5 10			
Bench of Magistrates, Tamut . . . . .	3 May, 1854	100 0 0	200 0 0		200 0 0
Bench of Magistrates, Drayton . . . . .	5 July, 1854	100 0 0			
Bench of Magistrates, Eden . . . . .	12 Sept., 1854	200 0 0	200 0 0		200 0 0
Bench of Magistrates, Eden . . . . .	1 Mar., 1854	200 0 0	200 0 0		200 0 0
Bench of Magistrates, Grafton . . . . .	8 May, 1854	200 0 0	200 0 0		200 0 0
Bench of Magistrates, McLeay River . . . . .	13 Mar., 1854	100 0 0	200 0 0		200 0 0
	12 Nov., 1855	100 0 0			
Bench of Magistrates, Tamworth . . . . .	14 Nov., 1854	200 0 0	200 0 0		200 0 0
Bench of Magistrates, Tenterfield . . . . .	1 Nov., 1855	25 0 0	25 0 0		175 0 0
Bench of Magistrates, Wagga Wagga . . . . .	1 Feb., 1855	150 0 0	150 0 0		50 0 0
					200 0 0
					200 0 0
					200 0 0
Bench of Magistrates, Wellingrove . . . . .	21 Sept., 1853	50 0 0	200 0 0		200 0 0
Bench of Magistrates, Maryborough . . . . .	24 July, 1854	150 0 0			
	27 Dec., 1853	200 0 0	200 0 0		
			2,375 0 0		2,825 0 0
H. Croudace . . . . .	9 July, 1855	13 0 0	13 0 0		
			13 0 0		
South Head Road Trust . . . . .	10 Sept., 1853	750 0 0	750 0 0		
Botany and Mudbank Road Committee . . . . .	14 Feb., 1853	300 0 0	300 0 0		
E. C. Close, J. Portus, and J. Wisdom . . . . .	15 Sept., 1853	300 0 0	300 0 0		
C. Simpson, Warden, Newcastle . . . . .	12 Jan., 1854	300 0 0	300 0 0		
C. G. Gray, Police Magistrate, Ipswich . . . . .	20 Dec., 1853	100 0 0	100 0 0		
J. Quirke . . . . .	7 Nov., 1853	41 3 9	247 17 7		52 2 5
W. Weaver, Colonial Architect . . . . .	31 Mar., 1856	206 13 10			
			1,997 17 7		52 2 5
Carried forward . . . . .		£ 46,403 0 0		6,957 17 10	8,988 12 5

PARTICULARS OF APPROPRIATIONS.			TOTAL.
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.	
	Brought forward .. .. .	.. .. .	62,350 0 0
	Wiseman's Ferry .. .. .	255 19 6	
	Raymond Terrace Ferry .. .. .	932 6 1	
Roads, &c., on which Tolls have been established, 1854 .. .. .	Bedlam Ferry .. .. .	25 0 0	
	Broughton's Water Hole .. .. .	36 0 0	
	Ferry over the River Murray .. .. .	50 0 0	
	Blackman's Point Ferry .. .. .	71 6 0	
	Emu Ferry .. .. .	362 13 1	
	Amount undistributed .. .. .	766 15 4	2,500 0 0
Great Western Roads, 1854 .. .. .	Parramatta to Eastern Creek .. .. .	225 0 0	
	Emu Ferry to Eastern Creek .. .. .	275 0 0	
	Emu Ferry to Pulpit Hill .. .. .	750 0 0	
	Pulpit Hill to Cox's River .. .. .	550 0 0	
	Cox's River to Macquarie River .. .. .	800 0 0	
	Bathurst to Frederick's Valley .. .. .	182 0 0	
	Frederick's Valley to Wellington .. .. .	637 0 0	
	Bathurst to Carcoar .. .. .	210 0 0	
	Carcoar to Canowindra .. .. .	224 0 0	
	Bowenfels to Mudgee .. .. .	476 0 0	
	Parramatta to Windsor .. .. .	133 0 0	
			4,462 0 0
Great Southern Road, 1854 .. .. .	Saltpan Creek to Cross Roads .. .. .	275 0 0	
	Cross Roads to Cowpasture Bridge .. .. .	375 0 0	
	Cowpasture Bridge to Picton .. .. .	275 0 0	
	Picton to Berrima .. .. .	775 0 0	
	Berrima to Marulan .. .. .	450 0 0	
	Marulan to Goulburn .. .. .	700 0 0	
	Goulburn to Yass .. .. .	385 0 0	
	Goulburn to Braidwood .. .. .	210 0 0	
	Goulburn to Queanbeyan .. .. .	420 0 0	
	Marulan to Bungonia .. .. .	245 0 0	
	Bungonia to Braidwood .. .. .	210 0 0	
	Cross Roads to Campbelltown .. .. .	63 0 0	
	Campbelltown to Picton by Menangle .. .. .	105 0 0	
Campbelltown to Appin .. .. .	70 0 0		
Appin to Wollongong .. .. .	217 0 0		
Wollongong to Dapto and Kiama .. .. .	98 0 0		
Kiama to Shoalhaven .. .. .	119 0 0		
			4,992 0 0
Great Northern Road, 1854 .. .. .	Morpeth to Singleton .. .. .	825 0 0	
	Singleton to Muswellbrook .. .. .	700 0 0	
	Muswellbrook to Scone .. .. .	425 0 0	
	Scone to Murrurundi .. .. .	625 0 0	
	Murrurundi to the Gap .. .. .	50 0 0	
	Newcastle to Maitland .. .. .	126 0 0	
	Maitland to Paterson .. .. .	77 0 0	
	Paterson to Gresford .. .. .	91 0 0	
	Singleton to Jerry's Plains .. .. .	168 0 0	
	Jerry's Plains to Merton .. .. .	91 0 0	
	Merton to Merriwa .. .. .	245 0 0	
Merriwa to Cassilis .. .. .	210 0 0		
Chichester, Clarence Town, Dungog and Seaham .. .. .	210 0 0		
			3,843 0 0
	Carried forward .. .. .	.. .. .	£ 78,147 0 0

Main Leading Thoroughfares within the Settled Districts, 1854.

## ROADS AND BRIDGES.

15

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .		£ 46,403 0 0		6,957 17 10	8,988 12 5
S. Butler .. .. .	7 April, 1854	16 0 0	255 19 6		
Mitchell and Co. .. .. .	6 July, 1854	4 19 0			
H. Falkner .. .. .	25 Aug., 1854	9 0 0			
John Cuthbert .. .. .	13 Mar., 1854	220 0 0			
William Weaver .. .. .	28 April, 1854	6 0 6	932 6 1		
J. Graham .. .. .	2 May, 1854	150 0 0			
M. Moriarty .. .. .	12 July, 1854	5 8 0			
John Cuthbert .. .. .	13 July, 1854	725 0 0			
F. Mitchell and Co. .. .. .	15 Feb., 1855	41 11 1	25 0 0		
A. Livingstone .. .. .	12 July, 1855	10 7 0			
F. Mitchell and Co. .. .. .	12 July, 1854	25 0 0			
E. T. Blacket .. .. .	10 Nov., 1854	36 0 0			
Kidd and Brickett .. .. .	9 July, 1855	50 0 0	50 0 0		
G. King .. .. .	14 June, 1854	4 10 0	71 6 0		
E. D. Day .. .. .	8 Sept., 1854	5 10 0			
H. Baldwin .. .. .	20 Sept., 1854	19 10 0			
D. Harriett .. .. .	7 Nov., 1854	10 0 0			
E. D. Day .. .. .	12 Feb., 1855	6 7 0	362 13 1		
F. Litchfield .. .. .	4 Dec., 1854	9 0 0			
J. F. Macarthur .. .. .	16 Jan., 1855	6 9 0			
Cook Road Committee .. .. .	25 May, 1855	10 0 0			
.. .. .	27 Aug., 1855	362 13 1		766 15 4	
.. .. .			1,733 4 8	766 15 4	.. .. .
Parramatta Road Trust .. .. .	4 Aug., 1854	225 0 0	225 0 0		
Penrith Road Trust .. .. .	14 Mar., 1854	137 10 0	275 0 0		
.. .. .	12 Oct., 1854	137 10 0			
Cook Road Committee .. .. .	14 Mar., 1854	375 0 0	750 0 0		
.. .. .	12 Oct., 1854	375 0 0			
J. Walker, Warden, Hartley .. .. .	9 Nov., 1854	275 0 0	550 0 0		
H. Heathorn, Warden, Bathurst .. .. .	24 Feb., 1855	275 0 0			
.. .. .	8 May, 1855	151 11 0	151 11 0		648 9 0
.. .. .				182 0 0	
.. .. .				637 0 0	
.. .. .				210 0 0	
.. .. .				224 0 0	
J. Walker, Warden, Hartley .. .. .	27 April, 1854	105 0 0	105 0 0		371 0 0
Parramatta Road Trust .. .. .	15 Mar., 1854	84 0 0	133 0 0		
Windsor Road Trust .. .. .	27 Dec., 1854	49 0 0			
.. .. .			2,189 11 0	1,253 0 0	1,019 9 0
Liverpool Road Trust .. .. .	7 June, 1855	275 0 0	275 0 0		
Narellan Road Trust .. .. .	3 Mar., 1854	375 0 0	375 0 0		
Bench of Magistrates, Picton .. .. .	21 Aug., 1854	87 10 0	87 10 0		187 10 0
Bench of Magistrates, Picton .. .. .	24 Mar., 1854	100 0 0	775 0 0		
.. .. .	21 Aug., 1854	162 10 0			
C. Throsby, Warden, Berrima .. .. .	24 Nov., 1854	512 10 0	450 0 0		
C. Throsby, Warden, Berrima .. .. .	24 Nov., 1854	450 0 0			
H. O'Brien, Warden, Yass .. .. .	8 June, 1854	192 10 0	192 10 0		700 0 0
.. .. .				192 10 0	
.. .. .				210 0 0	
.. .. .				420 0 0	
.. .. .				245 0 0	
.. .. .				210 0 0	
Campbelltown Road Trust .. .. .	16 Oct., 1854	63 0 0	63 0 0		
Bench of Magistrates, Picton .. .. .	23 Oct., 1855	70 0 0	105 0 0		
Campbelltown Road Trust .. .. .	23 Oct., 1855	35 0 0			
Bench of Magistrates, Appin .. .. .	26 Mar., 1855	70 0 0	70 0 0		
W. W. Jenkins, Warden, Illawarra .. .. .	19 April, 1854	203 0 0			
Bench of Magistrates, Appin .. .. .	7 Sept., 1855	14 0 0	217 0 0		
Bench of Magistrates, Kiama .. .. .	22 April, 1854	98 0 0			
Bench of Magistrates, Shoalhaven .. .. .	23 Feb., 1854	119 0 0	119 0 0		
.. .. .			2,827 0 0	1,277 10 0	887 10 0
J. C. S. M'Douall, Warden, Patrick's Plains .. .. .	6 May, 1854	350 0 0	825 0 0		
Maitland Road Trust .. .. .	18 May, 1854	475 0 0			
J. C. S. M'Douall, Warden, Patrick's Plains .. .. .	10 June, 1853	375 0 0	475 0 0		225 0 0
Bench of Magistrates, Muswellbrook .. .. .	15 May, 1854	100 0 0			
Bench of Magistrates, Murrurundi .. .. .	22 April, 1854	325 0 0	325 0 0		425 0 0
Bench of Magistrates, Murrurundi .. .. .	22 April, 1854	50 0 0			
W. Knox Child, Warden, Maitland .. .. .	18 May, 1854	63 0 0	126 0 0		300 0 0
C. Simpson, Warden, Newcastle .. .. .	11 Aug., 1854	63 0 0			
W. Knox Child, Warden, Maitland .. .. .	18 May, 1854	59 10 0	59 10 0		
.. .. .				17 10 0	
.. .. .				91 0 0	
.. .. .				168 0 0	
.. .. .				91 0 0	
.. .. .				245 0 0	
.. .. .				210 0 0	
Road Committee .. .. .	6 Nov., 1854	210 0 0	210 0 0		
.. .. .			2,070 10 0	822 10 0	950 0 0
Carried forward .. .. .		£ 55,223 5 8		11,077 13 2	11,845 11 5

PARTICULARS OF APPROPRIATIONS.			TOTAL.	
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.		
Main Leading Thoroughfares within the Settled Districts, 1854:—	Brought forward .. .. . £	.. .. .	78,147 0 0	
Moreton Bay Roads, 1854 .. .. .	Brisbane to Ipswich .. .. .	675 0 0		
	Ipswich to the Gap .. .. .	1,500 0 0		
	Ipswich to Spicer's Peak .. .. .	315 0 0	2,490 0 0	
Main Leading Thoroughfares beyond the Settled Districts, 1854 .. .. .	District of Albury .. .. .	200 0 0		
	District of Armidale .. .. .	200 0 0		
	District of Binalong .. .. .	200 0 0		
	District of Bombala .. .. .	200 0 0		
	District of Casino .. .. .	200 0 0		
	District of Cooma .. .. .	200 0 0		
	Tumut or Deniliquin .. .. .	200 0 0		
	District of Drayton .. .. .	200 0 0		
	District of Dubbo .. .. .	200 0 0		
	District of Eden .. .. .	200 0 0		
	District of Euston or Balranald .. .. .	200 0 0		
	Gayndah District .. .. .	200 0 0		
	District of Grafton .. .. .	200 0 0		
	District of Gundagai .. .. .	200 0 0		
	District of M'Leay River .. .. .	200 0 0		
	District of Molong .. .. .	200 0 0		
	District of Moulamein .. .. .	200 0 0		
	District of Tamworth .. .. .	200 0 0		
	District of Tenterfield .. .. .	200 0 0		
	District of Wagga Wagga .. .. .	200 0 0		
Wambo (Surat & Myall Creek) .. .. .	200 0 0			
District of Warialda .. .. .	200 0 0			
District of Warwick .. .. .	200 0 0			
District of Wee Waa .. .. .	200 0 0			
District of Wellingrove .. .. .	200 0 0			
District of Wide Bay .. .. .	200 0 0			
			5,200 0 0	
Roads Generally .. .. .	Maitland and Wollombi .. .. .	13 0 0	13 0 0	
Miscellaneous Roads .. .. .	South Head Road to Watson's Bay .. ..	670 0 0		
	Botany and Mudbank Road .. .. .	600 0 0		
	Lane Cove Road .. .. .	500 0 0		
	St. Leonard's to Lane Cove .. .. .	100 0 0	1,870 0 0	
Roads, &c., on which Tolls have been established, 1855 .. .. .	Emu Ferry .. .. .	333 6 8		
	Raymond Terrace Ferry .. .. .	348 19 10		
	Blackman's Point Ferry .. .. .	86 0 0		
	Moruya River Ferry .. .. .	130 0 0		
	Nepean River Ferry .. .. .	22 4 0		
	Bedlam Ferry .. .. .	45 0 0		
	Seventeen Mile Hollow Toll Gate .. ..	3 2 0		
	Amount undistributed .. .. .	1,531 7 6	2,500 0 0	
	Main Leading Thoroughfares within the Settled Districts, 1855.	Parramatta to Eastern Creek: .. .. .	225 0 0	
		Emu Ferry to Eastern Creek .. .. .	275 0 0	
Emu Ferry to Pulpit Hill .. .. .		750 0 0		
Parramatta to Windsor .. .. .		133 0 0		
Great Western Road, 1855 .. .. .	Amount authorized to be expended by the Colonial Architect on the Western Road	6,117 0 0		
			7,500 0 0	
	Carried forward .. .. .	.. .. .	97,720 0 0	



## ROADS AND BRIDGES.

17

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .	.. .. .	.. .. .	£ 55,223 5 8	11,077 13 2	11,845 11 5
C. G. Gray, Police Magistrate, Ipswich ..	8 May, 1855	337 10 0	337 10 0	.. .. .	337 10 0
Bench of Magistrates, Warwick .. .. .	22 May, 1854	210 0 0	210 0 0	.. .. .	1,500 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	105 0 0
.. .. .	.. .. .	.. .. .	547 10 0	.. .. .	1,942 10 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
Bench of Magistrates, Bombala .. .. .	31 Jan., 1854	200 0 0	200 0 0	.. .. .	200 0 0
Bench of Magistrates, Cooma .. .. .	15 Aug., 1855	200 0 0	200 0 0	.. .. .	200 0 0
Bench of Magistrates, Drayton .. .. .	12 Sept., 1854	200 0 0	200 0 0	.. .. .	200 0 0
Bench of Magistrates, Eden .. .. .	1 Mar., 1854	199 18 10	199 18 10	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	0 1 2
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
Bench of Magistrates, M'Leay River .. .. .	5 May, 1855	200 0 0	200 0 0	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
Bench of Magistrates, Wellingrove .. .. .	18 Oct., 1854	200 0 0	200 0 0	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	200 0 0
.. .. .	.. .. .	.. .. .	1,199 18 10	.. .. .	4,000 1 2
H. Croudace .. .. .	9 July, 1855	10 18 5	10 18 5	2 1 7	
.. .. .	.. .. .	.. .. .	10 18 5	2 1 7	.. .. .
South Head Road Trust, .. .. .	18 June, 1855	670 0 0	670 0 0		
Botany and Mudbank Road Committee ..	10 Mar., 1854	600 0 0	600 0 0		
Lane Cove Road Committee .. .. .	28 June, 1854	500 0 0	500 0 0		
G. Barney and O. Blossome .. .. .	26 Mar., 1855	100 0 0	100 0 0		
.. .. .	.. .. .	.. .. .	1,870 0 0	.. .. .	.. .. .
Wm. Taylor .. .. .	20 Mar., 1855	51 4 7			
D. C. F. Scott .. .. .	30 July, 1855	74 13 7			
Penrith Road Trust .. .. .	17 Aug., 1855	200 0 0	333 6 8		
F. Peisley .. .. .	16 June, 1856	7 8 6			
R. P. Holdsworth .. .. .	29 Mar., 1855	27 0 0			
.. .. .	15 June, 1855	220 1 3			
William Weaver .. .. .	20 June, 1855	30 9 0	348 19 10		
.. .. .	26 June, 1855	22 10 3			
.. .. .	11 Sept., 1855	7 12 10			
A. H. Jacobs .. .. .	19 Jan., 1856	0 10 0			
F. Mitchell, & Co. .. .. .	22 Feb., 1856	40 16 6			
F. Mitchell, & Co. .. .. .	10 May, 1855	80 0 0			
J. Bourne .. .. .	21 Dec., 1855	6 0 0	86 0 0		
C. Brown .. .. .	29 Aug., 1855	130 0 0	130 0 0		
Nepean Bridge Company .. .. .	25 Sept., 1855	22 4 0	22 4 0		
F. Mitchell, & Co. .. .. .	22 Feb., 1856	45 0 0	45 0 0		
William Weaver .. .. .	19 Mar., 1856	3 2 0	3 2 0		
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	1,531 7 6
.. .. .	.. .. .	.. .. .	968 12 6	.. .. .	1,531 7 6
Parramatta Road Trust .. .. .	8 Aug., 1855	225 0 0	225 0 0		
Penrith Road Trust .. .. .	11 April, 1855	137 10 0			
.. .. .	24 Aug., 1855	137 10 0	275 0 0		
W. Weaver .. .. .	19 Feb., 1855	750 0 0	750 0 0		
Windsor Road Trust .. .. .	11 April, 1855	49 0 0			
Parramatta Road Trust .. .. .	8 Aug., 1855	84 0 0	133 0 0		
.. .. .	28 Sept., 1855	1,471 0 7			
.. .. .	9 Nov., 1855	1,948 12 1			
.. .. .	15 Nov., 1855	1,186 4 10			
.. .. .	13 Dec., 1855	58 6 8			
William Weaver .. .. .	31 Dec., 1855	402 0 6	6117 0 0		
.. .. .	6 Feb., 1856	16 13 4			
.. .. .	19 Feb., 1856	487 11 11			
.. .. .	3 April, 1856	527 17 0			
.. .. .	18 April, 1856	4 4 0			
.. .. .	20 May, 1856	14 9 1			
.. .. .	.. .. .	.. .. .	7,500 0 0	.. .. .	.. .. .
Carried forward .. .. .	.. .. .	.. .. .	£ 67,320 5 5	11,079 14 9	19,319 10 1

## ROADS AND BRIDGES.

PARTICULARS OF APPROPRIATIONS.			TOTAL.
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.	
	Brought forward .. .. .	.. .. .	97,720 0 0
Main Leading Thoroughfares within the Settled Districts, 1855.	Great Southern Road, 1855 .. .. .	Salt Pan Creek to Cross Roads .. .. .	275 0 0
		Cross Roads to Cowpasture Bridge .. .. .	375 0 0
		Cross Roads to Campbelltown .. .. .	63 0 0
		Campbelltown to Picton, by Menangle .. .. .	105 0 0
		Campbelltown to Appin .. .. .	70 0 0
		Appin to Wollongong .. .. .	217 0 0
		Wollongong to Dapto and Kiama .. .. .	98 0 0
		Kiama to Shoalhaven .. .. .	119 0 0
		District of Picton .. .. .	100 0 0
		Amount authorized to be expended by the Colonial Architect on the Southern Road	6,078 0 0
			7,500 0 0
Great Northern Roads, 1855 .. .. .	Maitland to Singleton .. .. .	475 0 0	
	Newcastle to Maitland .. .. .	63 0 0	
	Maitland to Paterson .. .. .	59 10 0	
	Amount authorized to be expended by the Colonial Architect on the Northern Road	3,102 10 0	
			3,700 0 0
Moreton Bay Roads, 1855 .. .. .	District of Moreton Bay .. .. .	3,500 0 0	3,500 0 0
Roads and Bridges Generally, 1855 .. .. .	Breakfast Creek Bridge .. .. .	500 0 0	
	Long Bridge, Maitland .. .. .	150 0 0	
	Roads and Bridges, Tamworth .. .. .	450 0 0	
	Roads at Kurrajong .. .. .	100 0 0	
	Toll Bar and Cottage at the Main Range, near Drayton .. .. .	150 0 0	
	District of Cooma .. .. .	200 0 0	
	Roadway—Yass into Goulburn .. .. .	385 0 0	
	District of Tumut .. .. .	220 0 0	
	Bridge over a Creek near Carcoar .. .. .	200 0 0	
	Binalong to Bouring .. .. .	200 0 0	
	District of Bombala .. .. .	200 0 0	
	Orange to Bathurst .. .. .	14 9 5	
	Amount Undistributed .. .. .	2,430 10 7	
			5,200 0 0
Miscellaneous Roads, 1855 .. .. .	Botany and Mudbank Road .. .. .	600 0 0	
	Bridge over Stanley Creek, Durundur .. .. .	600 0 0	
	Bombala to Eden .. .. .	1,000 0 0	
	Bulga Mountain Road .. .. .	400 0 0	
			2,600 0 0
Roads, &c., on which Tolls have been established, 1856 .. .. .	Bedlam Ferry .. .. .	60 0 0	
	Emu Ferry .. .. .	5 10 6	
	Kempsey River Ferry .. .. .	26 12 3	
	Blackman's Point Ferry .. .. .	75 15 5	
	Amount Undistributed .. .. .	2,332 1 10	
			2,500 0 0
	Carried forward .. .. . £	.. .. .	122,720 0 0

ROADS AND BRIDGES.

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .			67,320 5 5	11,079 14 9	19,319 10 1
Liverpool Road Trust .. . . .	7 April, 1856	275 0 0	275 0 0		
Narellan Road Trust .. . . .	10 Nov., 1855	375 0 0	375 0 0		
Campbelltown Road Trust .. . . .	18 Dec., 1855	63 0 0	63 0 0		
Campbelltown Road Trust .. . . .	23 Oct., 1855	35 0 0	105 0 0		
Bench of Magistrates, Picton .. . . .	23 Oct., 1855	70 0 0	70 0 0		
Bench of Magistrates, Appin .. . . .	19 Nov., 1855	70 0 0	217 0 0		
W. W. Jenkins, Warden, Illawarra .. . . .	22 June, 1855	203 0 0	14 0 0		
Bench of Magistrates, Appin .. . . .	7 Sept., 1855	14 0 0	98 0 0		
Bench of Magistrates, Kiama .. . . .	10 Oct., 1855	98 0 0	119 0 0		
Bench of Magistrates, Shoalhaven .. . . .	3 Oct., 1855	119 0 0	100 0 0		
Bench of Magistrates, Picton .. . . .	31 Oct., 1854	100 0 0	928 7 3		
	7 Nov., 1855	928 7 3	963 6 7		
	15 Nov., 1855	963 6 7	58 6 8		
	13 Dec., 1855	58 6 8	861 0 2		
William Weaver .. . . .	31 Dec., 1855	861 0 2	16 13 4	6,078 0 0	
	6 Feb., 1856	16 13 4	2,019 0 10		
	19 Feb., 1856	2,019 0 10	917 12 6		
	28 Feb., 1856	917 12 6	313 12 8		
	31 Mar., 1856	313 12 8		7,500 0 0	
Maitland Road Trust .. . . .	18 Aug., 1855	475 0 0	475 0 0		
		63 0 0	63 0 0		
		59 10 0	59 10 0		
	11 Sept., 1855	1,678 16 11			
	7 Nov., 1855	693 12 3			
William Weaver .. . . .	9 Nov., 1855	563 7 6	3,102 10 0		
	13 Dec., 1855	58 6 8			
	6 Feb., 1856	16 13 4			
	18 April, 1856	91 13 4			
			3,700 0 0		
J. C. Wickham .. . . .	19 April, 1855	1,000 0 0			
	26 July, 1855	1,000 0 0	3,500 0 0		
	10 Dec., 1855	1,000 0 0			
	21 May, 1856	500 0 0			
			3,500 0 0		
J. C. Wickham .. . . .	19 Feb., 1856	250 0 0	250 0 0		250 0 0
					150 0 0
					450 0 0
					100 0 0
J. C. Wickham .. . . .	3 Dec., 1855	150 0 0	150 0 0		200 0 0
					385 0 0
Bench of Magistrates, Tumut .. . . .	10 Mar., 1856	100 0 0	100 0 0		120 0 0
					200 0 0
Bench of Magistrates, Binalong .. . . .	3 Dec., 1855	100 0 0	100 0 0		100 0 0
Bench of Magistrates, Bombala .. . . .	12 Jan., 1855	200 0 0	200 0 0		
Bench of Magistrates, Orange .. . . .	19 July, 1856	14 9 5	14 9 5		
{ A. Dawson, Colonial Architect, amount expended in excess of Appropriation for the Northern Road, 1855 .. . . }	30 April, 1856	755 5 8	2,430 10 7		
	31 May, 1856	1,675 4 11			
			3,245 0 0		1,955 0 0
Botany and Mudbank Road Committee .. . . .	24 June, 1855	600 0 0	600 0 0		
J. C. Wickham .. . . .	12 April, 1855	600 0 0	600 0 0		
	24 Mar., 1855	500 0 0			
Bombala and Eden Road Committee .. . . .	27 July, 1855	250 0 0	1,000 0 0		
	9 Nov., 1855	250 0 0			
J. Browne and S. B. Dight .. . . .	10 June, 1856	100 0 0	100 0 0		300 0 0
			2,300 0 0		300 0 0
E. Drinkwater .. . . .	8 May, 1856	60 0 0	60 0 0		
F. Peasley .. . . .	16 June, 1856	5 10 6	5 10 6		
R. S. M'Dougall .. . . .	3 June, 1856	26 12 3	26 12 3		
F. Mitchell and Co. .. . . .	16 June, 1856	73 10 1	75 15 5		
P. O'Doud .. . . .	21 June, 1856	2 5 4			2,332 1 10
					2,332 1 10
			167 18 2		2,332 1 10
Carried forward .. . . . £			87,733 3 7	11,079 13 9	23,907 2 8

## ROADS AND BRIDGES.

PARTICULARS OF APPROPRIATIONS.			TOTAL.	
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.		
	Brought forward .. ..	£ 122,720 0 0		
Main Leading Thoroughfares within the Settled Districts, 1856.	Great Western Road, 1856 .. ..	Parramatta to Eastern Creek .. .. . 225 0 0 Emu Ferry to Eastern Creek .. .. . 275 0 0 Emu Ferry to Pulpit Hill .. .. . 750 0 0 Parramatta to Windsor .. .. . 133 0 0 Amount undistributed .. .. . 6,117 0 0	7,500 0 0	
	Great Southern Road, 1856 .. ..	Salt Pan Creek to Cross Roads .. .. 275 0 0 Cross Roads to Cowpasture Bridge .. .. 375 0 0 Cross Roads to Campbelltown .. .. . 63 0 0 Campbelltown to Picton by Menangle .. 105 0 0 Campbelltown to Appin .. .. . 70 0 0 Appin to Wollongong .. .. . 217 0 0 Wollongong to Dapto and Kiama .. .. 98 0 0 Kiama to Shoalhaven .. .. . 119 0 0 Amount undistributed .. .. . 6,178 0 0	7,500 0 0	
	Great Northern Roads, 1856 .. ..	Maitland to Singleton .. .. . 475 0 0 Newcastle to Maitland .. .. . 63 0 0 Maitland to Paterson .. .. . 59 10 0 Amount Undistributed .. .. . 3,102 10 0	3,700 0 0	
	Moreton Bay Roads, 1856 .. ..	District of Moreton Bay .. .. . 3,500 0 0	3,500 0 0	
	Roads and Bridges Generally, 1856 ..	Bridge over Peel's River at Tamworth .. 170 0 0 Chichester, Clarence Town, Dungog, and Seaham .. .. . 460 0 0 Road over the Moonby Pass .. .. . 500 0 0 District of Albury .. .. . 200 0 0 District of Wollombi .. .. . 400 0 0 Amount undistributed .. .. . 3,470 0 0	5,200 0 0	
	Roads and Bridges Generally, 1856 ..	Amount Reserved to meet special appropriations .. .. .	2,600 0 0	2,600 0 0
	Miscellaneous Roads, 1856 .. ..	Randwick and Coogee Road .. .. . 400 0 0		
		Braidwood and Clyde River Road .. ..	2,000 0 0	
		Sydney to Wollombi .. .. . 570 0 0 Illawarra Road .. .. . 750 0 0		3,720 0 0
		TOTAL .. .. .	£ 156,440 0 0	

W. C. MAYNE,  
A. G.Audit Office, Sydney, New South Wales,  
13 November, 1856.

ROADS AND BRIDGES.

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
Brought forward .. .. .		£	87,733 3 7	11,079 13 9	23,907 2 8
Penrith Road Trust .. .. .	20 June, 1856	137 10 0	137 10 0		225 0 0 137 10 0 750 0 0 84 0 0
Windsor Road Trust .. .. .	17 April, 1856	49 0 0	49 0 0		
William Weaver .. .. .	31 Mar., 1856	1,726 2 3			
	30 April, 1856	918 7 0			
Alexander Dawson .. .. .	31 May, 1856	1,729 9 10	5,142 0 3		974 19 9
	30 June, 1856	768 1 2			
			5,328 10 3		2,171 9 9
					275 0 0 375 0 0 63 0 0 105 0 0 70 0 0 14 0 0
W. W. Jenkins, Warden, Illawarra ..	4 June, 1856	263 0 0	263 0 0		
Bench of Magistrates, Kiama .. .. .	9 May, 1856	98 0 0	98 0 0		
Bench of Magistrates, Shoalhaven ..	17 April, 1856	119 0 0	119 0 0		
William Weaver .. .. .	31 Mar., 1856	628 15 7			
	30 April, 1856	978 5 3			
Alexander Dawson .. .. .	31 May, 1856	1,098 11 6	3,668 11 9		2,509 8 3
	30 June, 1856	962 19 5			
			4,088 11 9		3,411 8 3
					475 0 0 63 0 0 59 10 0
William Weaver .. .. .	28 Feb., 1856	945 0 4			
	31 Mar., 1856	1,328 18 6			
Alexander Dawson .. .. .	30 April, 1856	828 11 2	3,102 10 0		
			3,102 10 0		597 10 0
Bench of Magistrates, Warwick .. ..	10 Mar., 1856	100 0 0			
J. C. Wickham .. .. .	21 May, 1856	500 0 0	600 0 0		2,900 0 0
			600 0 0		2,900 0 0
					170 0 0 460 0 0 500 0 0 100 0 0 400 0 0
Bench of Magistrates, Albury .. .. .	17 Mar., 1856	100 0 0	100 0 0		
A. Dawson, amount expended in excess of the Vote for Northern Roads, 1856	31 May, 1856	1,265 6 3			
	30 June, 1856	1,364 17 5	2,630 3 8		839 16 4
					2,600 0 0
			2,730 3 8		5,069 16 4
Committee of the Road .. .. .	1 Feb., 1856	400 0 0	400 0 0		
	3 Jan., 1856	69 15 9			
	16 Feb., 1856	200 0 0			
George Barney, Surveyor General ..	17 Mar., 1856	149 9 9			
	23 April, 1856	149 15 9			
	31 May, 1856	49 12 9	1,668 9 9		331 10 3
	20 June, 1856	149 15 9			
A. Weber, Superintendent of Road ..	7 Feb., 1856	900 0 0			
George Barney, Surveyor General ..	16 April, 1856	150 0 0	150 0 0		420 0 0 750 0 0
			2,218 9 9		1,501 10 3
TOTAL .. .. .		£	105,801 9 0	11,079 13 9	*39,558 17 3

\* Of this amount the sum of £17,736 10s. 11d., has been appropriated as shewn in the Appendix attached.

W. C. MAYNE,  
A. G.

Audit Office, Sydney, New South Wales, }  
13 November, 1856.

## APPENDIX TO THE

PARTICULARS OF APPROPRIATIONS.			TOTAL.
GENERAL HEAD OF SERVICE.	DISTRIBUTION.	AMOUNT.	
Main Leading Thoroughfares within the Settled Districts, 1854 .. .. .	Great Western Road .. .. .	1,806 9 0	1,806 9 0
	Great Southern Road .. .. .	887 10 0	887 10 0
	Great Northern Road .. .. .	3,175 0 0	3,175 0 0
	Moreton Bay Roads .. .. .	2,690 10 9	2,690 10 9
Main Leading Thoroughfares beyond the Settled Districts, 1854 .. .. .	Raymond Terrace to Morpeth .. .. .	82 6 1	
	Long Bridge, Maitland .. .. .	175 7 0	
	District of Brisbane Water .. .. .	300 0 0	
	Ballingarry, across Roland's Plains .. .. .	500 0 0	
	Stroud to Raymond Terrace .. .. .	100 0 0	
	Campbell's River to Bathurst .. .. .	500 0 0	
	Gosford to Maitland, over Broken Back Bridge .. .. .	500 0 0	
	Clearing the Bush on the sides of the River Hastings .. .. .	50 0 0	
	Bridge, Port Macquarie .. .. .	100 0 0	
	Maneroo to Twofold Bay .. .. .	200 0 0	
	Morpeth to Raymond Terrace .. .. .	500 0 0	
	Brisbane-street, Ipswich .. .. .	600 0 0	
	Clearing Stumps, &c., from the Main street of Albury .. .. .	50 0 0	
	District of Warwick .. .. .	600 0 0	
District of Tenterfield .. .. .	375 0 0		
Road to Adelong Creek .. .. .	75 0 0		
Amount Undistributed .. .. .	4,469 8 1	9,177 1 2	
	TOTAL .. .. .	£ 17,736 10 11	

W. C. MAYNE,  
A. G.*Audit Office, Sydney, New South Wales,  
13 November, 1856.*

FOREGOING RETURN.

PARTICULARS OF PAYMENTS.				BALANCE UNDRAWN OR UNAPPLIED AND CANCELLED.	BALANCE RESERVED.
TO WHOM ISSUED.	DATE.	AMOUNT.	TOTAL UNDER EACH HEAD.		
William Weaver, Colonial Architect	31 Dec., 1855	321 9 2	} 1,806 9 0		
	28 Feb., 1856	1,279 7 5			
	31 Mar., 1856	205 12 5			
			1,806 9 0		
William Weaver .. .. .	30 Nov., 1855	28 0 0	} 887 10 0		
	26 Feb., 1856	859 10 0			
			887 10 0		
William Weaver .. .. .	30 Nov., 1855	1,259 0 6	} 3,175 0 0		
	31 Dec., 1855	1,007 11 10			
	23 Feb., 1856	908 7 8			
			3,175 0 0		
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	2,690 10 9
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	2,690 10 9
E. C. Close .. .. .	17 June, 1855	82 6 1	82 6 1		
Maitland Road Trust .. .. .	13 Aug., 1855	175 7 0	175 7 0		
J. Moore, Warden, Brisbane Water	1 Oct., 1855	100 0 0	} 300 0 0		
	6 Mar., 1856	200 0 0			
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	500 0 0
J. C. White .. .. .	4 April, 1856	100 0 0	100 0 0		
W. H. Palmer, Warden, Bathurst..	10 Oct., 1855	250 0 0	} 500 0 0		
	2 Jan., 1856	250 0 0			
J. Moore, Warden, Brisbane Water	20 Oct., 1855	200 0 0	200 0 0		300 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	50 0 0
W. H. Freeman, Warden, Port Macquarie	1 Dec., 1855	100 0 0	100 0 0		200 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .
Raymond Terrace Road Trust .. .. .	17 April, 1856	500 0 0	500 0 0		
J. C. Wickham .. .. .	7 Dec., 1855	600 0 0	600 0 0		
H. Atkins, Police Magistrate, Albury	1 May, 1856	50 0 0	50 0 0		
Bench of Magistrates, Warwick .. .. .	17 Mar., 1856	600 0 0	600 0 0		
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	375 0 0
.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	75 0 0
.. .. .	.. .. .	.. .. .	.. .. .	4,469 8 1	
			3,207 13 1	4,469 8 1	1,500 0 0
TOTAL .. .. .	.. .. .	.. .. .	9,076 12 1	4,469 8 1	4,190 10 9

W. C. MAYNE,  
A. G.

Audit Office, Sydney, New South Wales, }  
13 November, 1856.





1857.

NEW SOUTH WALES.

**BRIDGE OVER THE CONDAMINE.**

(INHABITANTS OF WARWICK.)

*Ordered by the Legislative Assembly to be Printed, 9 January, 1857.*

To the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the Inhabitants of the Police District of Warwick, Darling Downs,—

SHEWETH :—

That your Petitioners reside in the Township of Warwick, situated on the south bank of the Condamine River.

That the banks of the Condamine are of an alluvial nature, and, consequently impassable by vehicles, and in most places by horsemen.

That there is no other way of crossing the Condamine in travelling from New England to Brisbane but over Bridges, built by private subscription, and placed upon purchased or leasehold ground.

That your Petitioners suffer considerable inconvenience from such a state of things, and do pray that your Honorable House will take the premises into your most favourable consideration, and cause such steps to be taken as may, in the opinion of your Honorable House, seem desirable.

That your Petitioners would beg to call the attention of your Honorable House to the fact, that the great northern Mail line passes through Warwick, and is dependent, in flood time, on the erection of a Bridge over the Condamine, to enable it to proceed.

And your Petitioners will ever pray.

*[Here follow 109 Signatures.]*



1856.

NEW SOUTH WALES.

## CAUSEWAY OVER THE FALLS AT WEST MAITLAND.

*Ordered by the Legislative Assembly to be Printed, 14 November, 1856.*

To the Honorable the Legislative Assembly of New South Wales.

The humble Petition of the Inhabitants of Maitland and the adjoining Districts,

RESPECTFULLY SHEWETH :—

That your Petitioners have often urged upon the notice of His Excellency the Governor General the serious inconvenience to which the Inhabitants of an extensive tract of country, including the populous and agricultural County of Durham, are subjected, through the want of a causeway over the Falls at West Maitland. The slightest rise in the river prevents ordinary traffic, deprives the children residing on the several farms contiguous to the town of the permanent benefits resulting from regular attendance at the many large and excellent schools established in Maitland, and prohibits their parents from worshipping on Sundays in their various churches; besides which, the water is very often so affected by the action of the tide as to be unfit for domestic or culinary purposes; and that His Excellency, from personal inspection, admitted the necessity of some remedy for evils so injurious to religion, commerce, and health.

Your Petitioners, however, have learned, with regret, that the sympathy so promptly and unequivocally expressed has not assumed, thus far, any practical form; and that, after long and patient expectation, the inhabitants of Maitland are to be burdened with the whole expense and responsibility of an undertaking so general in its beneficial results; and your Petitioners confidently appeal to your Honorable House to shield them from an infliction at once unreasonable and unjust. East and West Maitland, and Morpeth, have, for a series of years, contributed liberally and cheerfully to the General Revenue; and meanwhile, through the energy and enterprise of their respective inhabitants, they have grown into towns of considerable wealth and extent.

And your Petitioners respectfully, but firmly, object to the plan that would now empower them to tax themselves without a previous recognition on the part of the Government, in the shape of an endowment of their just and equitable claims upon the General Revenue of the Colony.

Your Petitioners, therefore, humbly pray, that your Honorable House will be pleased, upon mature consideration of the wants and arguments contained in these premises, to grant them relief, and adopt such a course of procedure as will realize the immediate commencement, and speedy completion, of a work so indispensable as a sanitary measure, and so well calculated to create a fund for further local improvements.

And your Petitioners will, as in duty bound, ever pray

[Here follow 653 Signatures.]

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be clearly documented and supported by appropriate evidence. This includes receipts, invoices, and other relevant documents that can be used to verify the accuracy of the records.

The second part of the document outlines the procedures for handling discrepancies and errors. It states that any inconsistencies should be identified immediately and investigated thoroughly. Once the cause of the error is determined, appropriate steps should be taken to correct the records and prevent similar mistakes from occurring in the future.

The third part of the document provides guidelines for the storage and security of records. It recommends that all records be stored in a secure and accessible location, protected from loss, damage, or unauthorized access. Regular backups should be performed to ensure that the data is preserved and can be recovered in the event of a disaster.

The fourth part of the document discusses the importance of regular audits and reviews. It suggests that the records should be audited periodically to ensure their accuracy and compliance with applicable laws and regulations. This process should involve a thorough examination of the records and a comparison of the results with the original data.

The fifth part of the document provides information on the retention and disposal of records. It specifies the minimum retention period for different types of records and the proper procedures for their disposal. This ensures that records are kept for the required period and then destroyed securely to protect sensitive information.

The sixth part of the document discusses the role of technology in record management. It highlights the benefits of using digital tools and software to streamline the record-keeping process, improve accuracy, and enhance security. However, it also notes the importance of ensuring that these tools are properly implemented and maintained.

The seventh part of the document provides a summary of the key points discussed and offers final recommendations for effective record management. It stresses the need for a systematic and consistent approach to record-keeping and the importance of ongoing training and education for staff involved in the process.

1856.

## NEW SOUTH WALES.

## DAM ACROSS WALLIS' CREEK, EAST MAITLAND.

*Ordered by the Legislative Assembly to be Printed, 14 November, 1856.*

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.  
The humble Petition of the undersigned Freeholders, Householders, and other Inhabitants  
of that part of the District of Maitland lying within and about the Town of East  
Maitland,

MOST RESPECTFULLY SHEWETH:—

That your Petitioners have ascertained, with much apprehension, that a Petition has been forwarded for presentation to your Honorable House from certain inhabitants of other parts of this District, setting forth the necessity of the construction of a causeway, in the shape of a dam, over the River Hunter, at a locality called "The Falls," at the Township of West Maitland, and praying relief at the hands of your Honorable House, and the adoption of such a course of procedure as will realize the immediate commencement, and speedy completion, of a work (in such Petition alleged to be) so indispensable as a sanitary measure.

That your Petitioners would, on the present occasion, particularly call the attention of your Honorable House only to such portion of the said Petition as relates to the construction of a dam at "The Falls."

That the residents of the Township of East Maitland, and lands in the vicinity have no resource whatever but Wallis' Creek (a tributary of the Hunter,) for their supply of water, except only two or three wells in the township, the property of private individuals, and to which the public have no right of access.

That above the said Falls the tide, at this present time, ebbs and flows (to a considerable extent,) at a distance therefrom of several miles, and, consequently the erection of a dam would cause a vast body of salt water to be thrown back and find its way into the creeks and inlets below such proposed Dam.

That the water of Wallis' Creek, not even now at all times quite fresh, would, consequently, be damaged along an extent of many miles by this unnatural influx of salt water; and at East Maitland would be totally unfit for human consumption, unless a dam be erected across the creek to prevent such access of salt water.

That should such dam at West Maitland be completed, and no dam be constructed across the creek, East Maitland, and the parts adjacent would be left entirely destitute of any reliable supply of water fit for use, and, in consequence, the town must eventually be almost entirely abandoned as a place of permanent residence.

That your Petitioners would respectfully urge upon your Honorable House the consideration of the inevitable losses and ruin that would accrue to your Petitioners, who have a large stake in the prosperity of East Maitland and its District, by being deprived of the blessing of a supply of pure water with which Providence has endowed the locality, which deprivation must, as a matter of course, ensue upon the construction of the one dam without the other.

Your Petitioners, therefore, humbly pray your Honorable House that the above premises may be taken into your most favorable consideration, and that, in the event of the erection of a dam at West Maitland, the same relief may be extended to your Petitioners; and that such measures may be taken as will effectually remedy the evils your Petitioners have above set forth, and as to your Honorable House shall seem meet.

And your Petitioners, as in duty bound, will ever pray, &c.

[Here follow 268 Signatures.]

Calculation of ...

The following table shows the results of the calculations for the ...  
 and for the ...  
 The results are as follows:

Year	...	...	...
1980	...	...	...
1981	...	...	...
1982	...	...	...
1983	...	...	...
1984	...	...	...
1985	...	...	...
1986	...	...	...
1987	...	...	...
1988	...	...	...
1989	...	...	...
1990	...	...	...
1991	...	...	...
1992	...	...	...
1993	...	...	...
1994	...	...	...
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2009	...	...	...
2010	...	...	...
2011	...	...	...
2012	...	...	...
2013	...	...	...
2014	...	...	...
2015	...	...	...
2016	...	...	...
2017	...	...	...
2018	...	...	...
2019	...	...	...
2020	...	...	...

The above table shows the results of the calculations for the ...  
 and for the ...

Conclusion

The results of the calculations show that ...  
 and ...

1856.

NEW SOUTH WALES.

WHARF ACROSS WOOLLOOMOOLOO BAY.

Ordered by the Legislative Assembly to be Printed, 19 December, 1856.

To the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned, owners and lessees of property, on and near the shores of Woolloomooloo Bay, and of other residents, on the North-Eastern parts of Sydney, and owners of Coasting and other vessels belonging to Port Jackson.

SHEWETH,—

That on the tenth day of October, one thousand eight hundred and fifty-one, a notice, to the following effect, appeared in the *Government Gazette* :—

“ It being deemed expedient that measures should be adopted for reclaiming the flat below high-water mark at the head of Woolloomooloo Bay, and for forming a wharf across it for the use of the public, as well as for extending the existing streets to the proposed quay and for proclaiming others along the bay from east to west, His Excellency the Governor General directs it to be notified, that to the proprietors of land having frontage to the bay it is proposed to concede portions of the reclaimed land, on condition of their filling up, at their own cost, to the contemplated line of wharf, and of their observing such conditions as may be imposed by the Corporate authorities of Sydney for the construction of proper drains.

“ 2. Proprietors of land in the locality in question are accordingly invited to inspect the plan, in conformity with which the land is to be reclaimed, at the office of the Surveyor General, and to signify, in writing, to the Colonial Secretary, within three months from this date, whether they desire to participate in the advantages arising from these measures, and are willing to abide by the conditions on which they can be extended to them.”

That, in accordance with this notice, various of your Petitioners, who were owners of land having frontage to the bay, notified their desire to fill up to deep water the portions of the flat in front of their allotments, and they were allowed to commence operations accordingly. Various wharves were run out from Bay-street across the flat, no objection being raised by the Government until the twentieth of January, one thousand eight hundred and fifty-two, when a notice was proclaimed of the intention of the Executive Government to continue certain streets, and open others at the head of Woolloomooloo Bay. The land owners, who were continuing to fill up the flat, were apprised that their works, already commenced, would be regarded as encroachments, and were forbidden to proceed.

That, on the nineteenth of September, one thousand eight hundred and fifty-three, another notice was issued setting forth, that in conformity with the provisions of the Act of Council, 5, William IV, number twenty, the breadths of the carriage and footways of the streets described in the notice of the twentieth of January, one thousand eight hundred and fifty-two, should be those set forth in the Schedule which was annexed to both notices, and that it consequently would not be lawful for any person to erect any building within the said distances from the curbstone or exterior edge of the said footways, as delineated in the plan submitted by the Surveyor General to His Excellency : upon which plan the wharves and other works, either already formed or in course of formation, were marked as “ encroachments,” whilst new purchasers were warned, that they would be proceeded against, under the above recited Act, if they attempted to occupy any portion of the flat fronting their respective purchases.

That, notwithstanding this entire deviation from the spirit and letter of the notice of one thousand eight hundred and fifty-one, no steps were taken by the Government to reclaim

reclaim the flat and to lay out the streets, and finding that some of the land owners still persisted in carrying out their works, under the permission granted them by the said notice, the Government, on the thirteenth of December, one thousand eight hundred and fifty-five, issued a Proclamation notifying that the permission conceded to owners of land, by the notice of one thousand eight hundred and fifty-one, to fill up the flat in the manner described, was withdrawn, except in so far as that permission had already been acted upon.

That the true meaning of this exception has not yet been explained, nor has the Government apprised the said owners of land whether it is still intended to carry out the published plan for opening new lines of streets in the flat.

That your Petitioners, under these circumstances of delay, humbly submit to your Honorable House the serious injury they suffer from the seeming abandonment of the proclaimed intention of the Government to construct a wharf across the bay: Further, that by not even taking steps to erect a suitable sea-wall or breakwater at the brink of the flat, and so prevent its extension, it is daily encroaching upon the navigable parts of the bay, by reason of the constant washing down into its waters the debris from the various roads, streets, and lanes on and near its shores.

That means for expeditiously constructing this necessary work are in immediate command, by reason of the great abundance of excellent stone on the western shore and contiguous to the work.

That the great importance of a Wharf or Semi-Circular Quay across or round the shores of Woolloomooloo Bay to the whole of the residents on the north-east side of Sydney is earnestly submitted to your Honorable House. The population of Cook Ward, which includes Woolloomooloo, Darlinghurst, South Head Road, Surry Hills and other locales, consisted, at the date of the recent census of 15,234 persons; and buildings, now rising in every direction, give promise of a speedy increase in the number of inhabitants.

That, by reason of the delay in constructing the promised wharf across the bay—which is the natural inlet for the large amount of farm produce, coals, wood, and other commodities consumed by so large a population—the coasting vessels, trading from the Hunter, Hawkesbury, and other districts, which bring up shipments, in whose consumption north-eastern Sydney so largely partakes, are now compelled to proceed to Darling Harbour in place of unloading in the natural inlet for the reception of produce intended for the residents in Cook Ward.

That, by being thus obliged to anchor in Darling Harbour, coasters are constantly exposed to various delays by reason of light and baffling winds which so frequently impede their passage from the Heads to their respective river wharves.

That the cost of carriage of coals and wood alone from the wharves in Darling Harbour to Woolloomooloo and other parts adjacent forms an important item. On the shores of the bay are establishments whose consumption of fuel is necessarily large; thereupon are situate the new works of the Australian Gas-light Company, Steam Machinery Establishments, either already in operation or in course of completion, and various manufactories of considerable extent.

Your Petitioners, therefore, pray your Honorable House to take the premises into consideration, and beg permission to add their hope that the decision of so important a question as they now submit will no longer be delayed, and that the serious injury accruing to this valuable navigable bay may be at once arrested, feeling assured that otherwise the future cost of removing the tonnage of sand and sullage, which now threatens to choke up the bay, will be enormous.

And your Petitioners, as in duty bound, will ever pray, &c., &c., &c.

[Here follow 151 Signatures.]



1856.

NEW SOUTH WALES.

# CITY SEWERAGE WORKS.

(REPORT FROM BOARD.)

*Ordered by the Legislative Assembly to be Printed, 4 June, 1856.*

## SCHEDULE.

No.	PAGE.
1 Colonial Secretary to A. Dawson, Esquire, 20 March, 1856, respecting inspection of City Sewerage Works .. .. .	2
2 Colonial Secretary to Deputy Master of the Mint, 20 March, 1856, on same subject ..	2
3 Colonial Secretary to City Commissioners, 20 March, 1856, on same subject.. ..	2
4 Messrs. Bell, Trickett, and Dawson, to Colonial Secretary, 17 May, 1856, Reporting on City Sewerage Works .. .. .	3

## CITY SEWERAGE WORKS.

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### No. 1.

THE COLONIAL SECRETARY to A. DAWSON, ESQUIRE.

*Colonial Secretary's Office,  
Sydney, 20 March, 1856.*

SIR,

I have the honor to transmit to you, a copy of the Report of the "Select Committee" of the Legislative Council on the City Commissioners Department, and I am directed by His Excellency the Governor General, to request that you will place yourself in communication with the City Engineer, and with Mr. Trickett, of the Mint, and go with those gentlemen into a close and accurate inspection of all the Sewerage Works; making a full Report, not only as regards their execution, the character of material, and that of the excavation—whether stone, or earth, &c.,—but also as to the general plan of the Works.

I have, &c.,  
(Signed) W. ELYARD.

A. DAWSON, ESQUIRE.

&c.,            &c.,            &c.

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### No. 2.

THE COLONIAL SECRETARY to THE DEPUTY MASTER OF THE MINT.

*Colonial Secretary's Office,  
Sydney, 20 March, 1856.*

SIR,

I am directed by His Excellency the Governor General, to inform you, that Mr. Dawson has been desired to place himself in communication with Mr. Trickett, and the City Engineer, and to go with those gentlemen into a close and accurate inspection of all the City Sewerage Works; making a full Report, not only as regards their execution, the character of material, and that of the excavation—whether stone, or earth, &c.,—but also as to the general plan of the Works.

2. You will have the goodness to instruct Mr. Trickett accordingly.

I have &c.,  
(Signed) W. ELYARD.

CAPTAIN WARD, R. E.,

Deputy Master of the Mint.

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### No. 3.

THE COLONIAL SECRETARY to THE CITY COMMISSIONERS.

*Colonial Secretary's Office,  
Sydney, 20 March, 1856.*

GENTLEMEN,

I am directed by His Excellency the Governor General, to inform you, that Mr. Dawson has been desired to place himself in communication with the City Engineer, and with Mr. Trickett, of the Mint, and to go with those gentlemen into a close and accurate inspection of all the City Sewerage Works; making a full Report, not only as regards their execution, the character of material, and that of the excavation—whether stone, or earth, &c.,—but also as to the general plan of the Works.

2. You will have the goodness to instruct the City Engineer accordingly.

I have &c.,  
(Signed) W. ELYARD.

THE COMMISSIONERS

FOR THE CITY OF SYDNEY.

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No.

No. 4.

THE COMMITTEE appointed to Examine and Report upon the City Sewerage Works, to THE HONORABLE THE COLONIAL SECRETARY, forwarding their Report.

Sydney, 17 May, 1856.

SIR,

In compliance with the instructions of His Excellency the Governor General, as contained in your letter of the 20th March, No. 46, desiring us to make a close and accurate inspection of all the City Sewerage Works, making a full report, not only as regards their execution, the character of the materials, and that of the excavation—whether stone or earth, &c.—but also as to the general plan of the works,—we have the honor to state that we have, as far as practicable, carried out the above instructions, and beg to submit the following Report of our investigations into these works.

With regard to the execution of the work, and the character of materials used, there are many difficulties existing which prevent a thorough examination of the works finished; but all practicable means have been adopted to effect this end: the ground has been opened in several places, all the shafts and manholes uncovered and examined, and we have traversed and thoroughly examined nearly the whole of the sewers; we have also inspected the work in progress, and the several parts that are not covered up; and, upon these inspections, we are able to state, that the work upon the whole is sound and substantial, and the materials generally sufficient, and of good quality. The brickwork in many parts is of the best description. The cement is generally good, and set hard and sound. In a few parts the bricks are not so hard and sound as it is desirable they should be in a work of this nature: this is the case more particularly in Bridge-street, and part of Pitt-street sewers. In these parts, however, we believe the work is sufficiently sound and good, and that no perceptible evil or defect in the work is likely to occur, from any inferiority there may be in the bricks.

The cement rendering generally is carelessly executed, and in many parts too much sand has been used with the cement to ensure sound and durable work; but as none of the sewers are in use, excepting part of the Pitt-street sewer, there is every opportunity for performing this work, except in the sewer above mentioned, by removing the defective parts and rendering them again with proper materials. These defects have been made known to the contractor, with an intimation that the same must be remedied before the works can be finally measured and passed.

With respect to the general plan of the works, so far as the sewers are laid down for that portion of the City called Section No. 1 of the "City Sewerage Works," bounded by George, Bathurst, and Macquarie streets, we consider it well adapted for the purpose for which it was intended. The gradients of all the sewers laid down in that section are sufficient in every respect for carrying off the sewage matter, and storm water, within the boundaries of the district, so as to allow of no accumulation of matter to deposit itself and obstruct the working of the sewers.

While making our inspection of the Sewerage Works under Section No. I, which lie chiefly on the eastern side of the Tank Stream, with a view to form an opinion of the general plan, our attention was directed by the City Engineer to the practicability of extending the usefulness of the works of this section, by draining the remainder of the same catchwater or watershed which lies on the western side of the Tank Stream into the Main Sewer of Section No. 1. (Section No. 1 is shewn tinted red in the accompanying plan, and the remainder of the catchwater basin proposed to be drained into the same Main Sewer is tinted blue, and comprises an area of 65 acres.)

On computing the sectional areas of these Sewers, and comparing them with the superficial area of the district they are intended to drain, we find them of much greater capacity than is absolutely necessary, and that they are capable of effectually draining a much larger area than that allotted to them.

The MAIN SEWER is 6 feet high, by 4 feet wide, and extends from the foot of Pitt-street to the point of discharge at Fort Macquarie; its sectional area is 18½ feet, which is equal

equal to the drainage of (557) five hundred and fifty-seven square acres, whilst the area to be drained, by Section No. 1 City Sewerage Works, amounts to no more than (141) one hundred and forty-one acres.

On looking at the basin or watershed, which naturally drains itself towards the Tank Stream into Sydney Cove, and of which basin the area of Section No. 1 forms only a part, it is obvious that the portion of the basin westward of the Tank Stream should be drained by the same outlet as that on the eastern side; excepting a small portion lying round Sydney Cove, which always has, and must, on account of its low level, drain itself by that source. Although it was not originally the intention to drain the western portion of the basin through the Main Sewer now constructing, we have found, from the above computation, that it is of sufficient capacity to effectually drain the whole basin, the total of which area amounts to 207 acres, whilst the capacity of the Main Sewer is equal to 557 acres—thereby leaving a large margin for any extraordinary fall of storm water that may be ever likely to occur.

Having satisfied ourselves that the capacity of the Main Sewer is sufficient to drain the whole of the district above referred to, we have directed our attention to the means of draining the additional area by this source, and find that there will be no difficulty. The only alteration which the City Engineer thinks it probable he may have to make in the present sewers, being to take up the small piece of 3 ft. 6 in. sewer, now laid in Bridge-street, and replace it by a 4 ft. 6 in. sewer, to connect with the main at its present junction at the foot of Pitt-street, and this alteration is all we consider likely to be necessary to effect this object.

It is obvious, therefore, from these suggestions, and a view of the plan of the district, that this system of drainage will be quite as effective, and far less expensive than constructing a Main Sewer through George-street; besides avoiding the great inconvenience that the town would be put to by the obstruction of the traffic through the principal thoroughfare of the city.

“The character of the excavation—whether stone, or earth, &c.,” we have carefully examined into. Throughout the greater portion of the works the ground on the surface is composed of soil, whilst the substratum is compact sandstone rock. In Elizabeth, Castle-reagh, and Pitt-streets north, we find the ground composed of other materials so mixed and varied in their character that they cannot be described either as rock or soil. We have adopted the best means in our power to form an equitable opinion upon this subject, by having pits sunk in these various places close beside the sewer, and to the full depth of them, in order to judge of the nature of the ground, and the difficulty of excavating it. We found, from 5 feet under the surface to be of loam; below this it is hard and unyielding, consisting partly of veins and nodules of iron stone, pebbles, &c., and intersected with thick strata of a very tenacious description of pipe-clay, very compact, and nearly as difficult to work as rock.

It is, therefore, clear that this mixed ground cannot be classed under the head of rock or soil, and as there is no price in the Schedule for working in any other material, the only alternative to adopt, was the course usual in all cases where the works vary from those specified, to pay for it by a price analogous to that named for the nearest description of work in the Schedule.

Having made these general observations, we now proceed to state the descriptions of ground through which the various sewers have been carried, commencing with

The MAIN SEWER, which, like all the other sewers, is oviform, and is tunnelled through sandstone rock from Fort Macquarie to the foot of Macquarie-place, a distance of 2,412 lineal feet, thence along Macquarie-place, to the junction of Pitt and Bridge street Sewers, through the sandstone rock, with a roof of soil, excepting about 100 lineal yards, which appears to have been done in open cutting.

The PITT-STREET SEWER, next in size to the Main Sewer, appears to have been tunnelled through rock 2,121·2 lineal feet, and partly through the mixed ground we have described, to the extent of 975 lineal feet, and excavated partly in sandstone rock and partly in soil about 860 lineal feet.

The CASTLEREAGH-STREET SEWER has not yet been driven, excepting at the north end, and this tunnel has been made through the mixed soil for a distance of 425 lineal feet; it has also been driven in various places along the line of street to the extent of 954 lineal feet in rock.

The ELIZABETH-STREET SEWER has been tunnelled to the extent of 2,783 lineal feet in rock and 774 lineal feet in the mixed ground. As this ground has been tunnelled it will fairly take a price estimated at  $\frac{2}{3}$  that of rock and  $\frac{1}{3}$  that of soil in the Schedule. There are 734 lineal feet of excavation in this street, through the mixed ground, which will take a price estimated at half that for rock and half that for soil in the Schedule.

The PHILLIP-STREET SEWER is tunnelled in rock to the extent of 2,292 lineal feet, and excavated 198 lineal feet, half the depth in soil and half in the sandstone rock.

MACQUARIE-STREET is tunnelled to the extent of 2,743 lineal feet in rock, and excavated 124 lineal feet, half the depth being in soil, and half in the sandstone rock.

BRIDGE-STREET is excavated in soil 265 lineal feet, in rock 38 lineal feet, and tunnelled in rock 45 lineal feet.

By the foregoing detail of the work executed it will be seen that the tunnelling bears a larger proportion than the open excavations. This may have been done, and doubtless was to some extent, with the view of interrupting the main thoroughfares as little as possible; but, for the purpose of performing the work in the most perfect and substantial manner, it is desirable that tunnelling should not be resorted to, except under certain circumstances.

It is necessary to remark that the sewers appear to have been commenced simultaneously throughout the whole section, and the lower part of the work was not properly finished, as it should have been, before the upper part was commenced. Every exertion is now making to complete the lower part of the work, by finishing the main tunnel, which is driven and open the whole length. The brickwork may be executed in a few weeks, and then no time should be lost in completing all the work which has been commenced in this section, as underground work when left standing unfinished, and subject to the action of water which contains many impurities, deteriorates considerably, and are thus difficult to finish.

We have, &c.,  
E. BELL, M. Inst. C. E.  
City Engineer.  
J. TRICKETT, Supt.  
Coin. Dt. Rl. Mint.  
ALEXR. DAWSON,  
Colonial Architect.

THE HONORABLE  
THE COLONIAL SECRETARY,  
&c., &c., &c.



1856.

NEW SOUTH WALES.

CITY COMMISSIONERS.

(Ordered by the Legislative Assembly to be Printed, 26 May, 1856.)

(1855.)

SECOND YEARLY REPORT of the City Commissioners on the General City Improvements—the Sewerage—the Water Works—with the State of their Finances, for the year 1855.

To His Excellency SIR WILLIAM THOMAS DENISON, Knight, Governor General of New South Wales and its Dependencies, &c., &c., &c.  
May it please your Excellency,—

We, the undersigned, Commissioners for the City of Sydney, appointed under the Act of Council, 17 Victoria, No. 33, beg most respectfully to submit to your Excellency a Report of our proceedings, and a statement of our Receipts and Expenditure, under the Acts specified in the margin, from the 1st January to the 31st December, 1855.

1. Adhering to the arrangement adopted in our first Yearly Report, we shall describe our proceedings under the following heads, viz. :—

- I. GENERAL CITY IMPROVEMENTS.
- II. SEWERAGE.
- III. WATER.
- IV. FINANCIAL.

I.—GENERAL CITY IMPROVEMENTS.

2. Under this head are included all our proceedings not specially belonging to sewerage and water. The work performed in this department has been extensive and varied, embracing all the wards of the City, and a considerable number of streets in each ward. Our improvements have extended (as will be seen from the accompanying plan) from Miller's Point to the boundary at Cook's River Road; and from Darling Harbour to Upper William-street. We have endeavoured to expend the funds intrusted to us in the most careful manner for the City; and although it is impossible, with a limited amount of taxation, to attend to every street in the course of one year, our improvements have been made where we considered them most wanted. While Phillip Ward, however, has had its fair share of attention, Pymont—a portion of that ward—has been necessarily neglected; but we trust that we shall be able to make considerable improvements in that locality during the present year.

3. The streets in Pymont, which should, according to law, be formed by the proprietors of the land, before we are called upon to repair them, are almost in a state of nature; and the amount required to put them in thorough repair, would be far greater than we should feel ourselves justified in expending; but as a number of the inhabitants have petitioned us to erect a wharf for the public convenience, which they consider to be more urgently wanted than the repair of the streets, we have ordered an estimate of the work to be prepared, and propose to invite tenders for carrying it out.

4. The tabular statement appended, marked D, will show the nature, extent, and locality, of the improvements effected during the past year. There have been excavations to the extent of 535,987 cubic feet, and 57,630 cubic feet of filling in; 5,815 tons of blue road metal, and 11,630 tons of iron stone gravel, have been laid down on the streets. Kerbing, to the extent of 15,764 lineal feet, and 56,080 superficial feet of guttering, besides 10,821 lineal feet of rough guttering, 6,009 superficial feet of gutter crossings, 46,108 lineal feet of water channels, and many minor works, have been performed chiefly by contract.

5. We have adopted, to the fullest extent possible, the method which we commenced towards the end of 1854, as the most efficient and economical, namely, of carrying out all our works by contract. Almost the only exception to this rule is the watering of George-street, for which service we have repeatedly invited Tenders, but have not been able to obtain a satisfactory offer.

6. Our working staff, at one time amounting on an average to 130, has been reduced to a few labourers and carters for watering the streets, and petty jobs; while the wages of the staff has decreased from an average of £400. to one of £70 per week.

7. The supply of iron stone gravel which we obtained from the Domain for the formation of the South Head Road, William, and other streets, has almost entirely failed. It was very well adapted for streets of secondary importance; but where the traffic is considerable, it is scarcely worth the expense of cartage. The South Head Road, for instance, which was thoroughly repaired with that material last year, is already breaking up in different places, and will require immediate attention. The ship ballast, however, now brought from New Zealand, Tasmania, and other places, in considerable quantities, and the supply of which will probably keep pace with the demand, forms an admirable substitute for the iron stone gravel; and, though involving a greater outlay at first, its use will effect an ultimate saving, from its being so much better fitted to resist the wear and tear of traffic.

8. The heavy expense incurred in procuring the blue metal from Pennant Hills Quarry induced us to discontinue its working on the 31st December last. At that period, we had 1,265 tons of broken metal lying at Soldier's Point Wharf, and 289 tons of unbroken metal on hand, sufficient for our requirements for several months; and it is to be hoped that a cheaper supply of this material may ultimately be obtained, by means of the Railway, from the hills at Prospect, where the quantity of metal appears inexhaustible, and of easy access, cropping out from the surface in all directions. In anticipation of such a means of procuring the metal, we have delayed taking any steps, beyond surveying the grounds, for the construction of the tramway from the Pennant Hills to the Parramatta River, for which an Act was passed during last Session of Council.

#### SANITARY.

9. The arrangements adopted for improving the sanitary state of the City during 1854, as detailed in our last Report, have been continued, with little variation, during 1855. The decreased number of cases disposed of under the Police and other Acts, by adjudication of the Justices, or amicably arranged by the interposition of our Inspectors, shews that the number of nuisances has been considerably abated. By the Yearly Abstract of these Officers' weekly returns for 1854, it appears that 934 cases had been disposed of during that year; while the abstract of the same returns for 1855 exhibits only 361.

10. From the want of back entrances to the premises in many parts of the City, from a deficiency of funds and other causes, we have been unable hitherto to erect fixed dust boxes, as anticipated in our former Report. The removal of dust and rubbish, however, being now performed by contract, we have endeavoured to abate the nuisance occasioned by the constant exposure of the moveable dust boxes, by publishing the days on which the dust carts visit each street and lane in the City. The number of loads of dust and rubbish removed by the dust carts during the year has been 34,552, besides many hundred loads of accumulations in back premises.

11. The removal of night soil has been performed partly by our own contractor, and partly by private parties. The quantity removed by the former amounted to 59,767 cubic feet; but we have no means of ascertaining the additional quantity removed by the latter. The price charged per cubic foot has been considerably reduced, and is now so reasonable, that there can be no excuse for the accumulation of offensive matter in cesspools. Our Inspectors have accordingly received strict orders to insist on the cleansing of all privies where such accumulations exist.

12. The Inspector of Slaughter Houses, and Cattle intended for Slaughter has been vigilant in the discharge of his duties. Besides attending to the efficient cleansing of the slaughter houses, his returns shew that, during the year, he has inspected and entered the brands and description of 31,141 head of horned cattle, and 200,000 sheep. He has condemned, as diseased and unfit for human food, 181 carcasses of mutton and 79 carcasses of beef; and has obtained convictions for the following offences, viz.: 2 for blowing calves intended for human food, 1 for exposing a quantity of blown veal for sale, 1 for exposing a diseased bullock for sale, and 3 for neglecting to remove the blood, filth, and offal, from the slaughter houses within the time prescribed by law.

#### WATERING THE STREETS.

13. By the 2nd section of the Act of Council, 18th Viet., No. 30, we are empowered to water any street, road, place, or square, at the expense of the inhabitants thereof. We have not, however, extended the watering beyond George-street during 1855, from our unwillingness



willingness to increase our liability to the Bank, and the difficulty we have experienced in obtaining what we considered reasonable tenders for the work. But we have erected three pumps to supply the water carts, viz., one at the Circular Quay, one at the end of Liverpool-street, and one near the Hay-market; which will enable us to extend the benefit of watering to other streets, as soon as we obtain an eligible tender for this service.

#### CITY MARKETS.

14. The Campbell-street Market, which was fitted up for the sale of fruit and vegetables during 1854, is now retained in our hands. The stalls have not been so fully occupied as we anticipated; and unless the inhabitants in that portion of the City make more use of it during the present year, it may be advisable to convert a portion of it into a Corn Market, which would yield an increased revenue. We have, at considerable expense, entirely new roofed and new spouted with galvanized iron, the George-street Market. This work was imperatively called for, as the old shingled roof was no longer water-proof. The new roofing has not only increased the comfort of the stall-holders and the frequenters of the market, but improved the appearance of the building. It is now in contemplation to erect boards for the affixing of placards; to paint the whole wood-work of the Markets; and to prevent any placards from being afterwards affixed on the walls or wood-work of the building. It is also our intention, if practicable, to open the east side of the Market facing George-street into a line of shop fronts, which would add to the public convenience, and considerably increase the City Revenue. Since the Markets were placed in our hands, the revenue has increased more than 300 per cent. per annum. The receipts for 1853 were £1,532 5s. 5d., and for 1854, while the stall rents were still let by auction, £1,701 6s. 6d., while the receipts during last year, including the Campbell-street Market, were £5,163 16s. 6d.

#### CITY WHARFS.

15. A tender having been accepted for the construction of the Lime-street Wharf, and the extension of several Jetties into deep water, considerable progress was made in the work, when the contractor, Mr. Pusey, got into pecuniary difficulties. The contract was accordingly cancelled, and fresh tenders were invited for completing the work. The tender of Messrs. Grant and McLean was accepted, and the work will be finished in a few weeks. We have delayed commencing the extension of Market Wharf into deep water till the completion of the Lime-street Wharf, in the anticipation that a short delay will considerably diminish the cost of the work.

The revenue from these wharfs, when completed, will be considerable; sufficient, it is hoped, in a few years, to pay off the money borrowed for their extension and improvement.

#### FOOT PAVEMENTS.

16. The Paving Act passed last Session will enable us to put the footpaths of George, Pitt, and the cross streets between them, in proper repair. The preparation of the specification for this work has caused us considerable anxiety, from our wish to secure the best material for the pavements at the least cost to the proprietors. We have finally adopted a specification by which we trust both objects will be combined; and have issued a series of notices to pave, in accordance with the Act. As it would be impossible, or, if possible, undesirable, to have the whole of the pavements proceeded with at once, we intend to issue a number of notices from time to time, so as not unnecessarily to raise the price for performing the work. Appendix E.

#### NEW BUILDINGS.

17. A Return from the Building Surveyor shews that during the year 1855, the new buildings erected in the City amounted to 535; while 50 additions and 65 alterations have been made to buildings already in existence.

#### BY-LAWS.

18. The By-Laws for regulating Hackney Carriages and Omnibuses have been revised, and divided into a separate code for each. We have experienced considerable difficulty in appointing stands for these vehicles, convenient for passengers, without injury to shopkeepers and others; but by forming a new general stand in Wynyard-square, and allowing, as we propose, one omnibus at a time to ply from King-street, a very central situation we trust that we shall succeed in giving satisfaction to all parties. During the year 1855, there have been issued 42 licenses for omnibuses, 83 for hackney carriages, and 300 for drays; the license fees for which have amounted, including drivers' licenses, to £1,143. For breaches against these by-laws 335 cases have been disposed of by adjudication in the Commissioners' Court during last year.

LIGHTING,

## LIGHTING.

19. The Directors of the Gas Company have made considerable progress with their works for supplying gas to those portions of Cook, and Phillip Wards, now without mains. It is our intention, as soon as their works are completed, to take advantage of the opportunity that will thus be afforded us, of extending, as far as the means placed at our disposal will allow, the benefit of lighting to those parts of the City whose inhabitants now contribute their share of the expense, without receiving any direct advantage in return.

## II.—SEWERAGE.

20. Under this head are comprised, first, the Repairs which we have found it absolutely necessary to make, to the present drains of the City, so as to maintain them in a tolerably serviceable condition; and, secondly, the construction of an entirely new and more perfect system of drainage.

21. It is not necessary that we should say much on the first head; the repairs to existing drains having been reduced to the smallest possible compass, compatible with the necessity of keeping them in a temporary state of usefulness, as it was not considered advisable to make a large outlay on temporary works so soon, in the majority of cases, to be superseded by those of a more permanent character.

22. The condition of the existing public drains is most deplorable. There are no plans or maps by which their position, or direction, or point of discharge, can be ascertained; and, in several instances, until they fell in, their existence was not even suspected. They are generally in so ruinous a state that a moderate fall of rain causes them to burst. We may observe that the bricks, of which they are principally constructed, have not, in most cases, decayed; but that the mortar used has almost entirely perished and disappeared. To this cause, added to their faulty construction and bad workmanship, may be attributed their present almost useless condition.

Appendix F.  
(C.)

23. The survey of the City and environs, equally necessary for the New Water, as for the New Sewerage Works, has advanced considerably during the past year, as will appear by reference to the return annexed to the Engineer's Report, marked F, which details the progress made in the New Sewerage Works during the year 1855, and up to the present period, and is so ample in its details, as to leave very little to be added. We would, however, observe, that it is the unbiassed opinion of an Engineer of long standing and experience on works, the majority of which were executed not only previous to his appointment to the office he now fills, but previous even to his arrival in this country, and who having himself to superintend their completion, would not be likely, for his own credit's sake, to screen any errors committed by his predecessor in office. We therefore beg particularly to draw your Excellency's attention to his Report.

24. All discoverable deficiencies that exist in that portion of the sewers already constructed are pointed out in the Report alluded to, and will be made good. They are, however, but few in number, of inconsiderable extent, and susceptible of easy adjustment; sufficient funds having at all times been retained to meet any contingencies of the kind. The opinion that we have always entertained of the general good character of the materials and work, is fully borne out by the above Report; and we are strengthened in our belief that the principles upon which the new system of sewerage is founded, are correct both in theory and practice.

Appendix F.  
(B.)

25. It will also be seen that the Appendix to the Engineer's Report, contains the results of a most careful and accurate measurement of the sewerage works executed up to the present period. No pains or labour have been spared to make this measurement, with the calculations founded on it, perfectly correct; and, as the Engineer has not trusted to the opinions or measurements of others, in a matter where so much is at stake, but has personally examined every portion of the work, and superintended every measurement, we have the fullest confidence that the results arrived at by him are correct, and will, therefore, be satisfactory to your Excellency and the Parliament of New South Wales.

## III.—WATER.

26. The City of Sydney, with its large and constantly increasing population, still continues to be dependent for water on the natural drainage from the Lachlan Swamp, assisted by one pump worked by steam, raising water from a few feet lower level than the tunnel. During the past year, owing to the abundant supply of rain, much in excess of ordinary seasons, the City has not suffered even the usual amount of inconvenience; but we dread the consequences of a dry Australian summer with such a precarious supply.

27. It appears that, in order to keep that portion of the City to which water is already laid on, well supplied, it is necessary that the water at the swamp end of the tunnel should be maintained at a height of 20 inches; for, if it falls below 17 inches, the residents in the higher levels complain of a scanty supply. To keep the water to the required level, it has been found necessary, notwithstanding the large quantity of rain fallen, to work the engine during the past year 2,121 hours, or 88 days 9 hours, or one quarter of the year, during which period it is calculated that upwards of 20,000,000 gallons have been raised, and delivered by it into the tunnel, in aid of that received from the natural drainage. But it was further ascertained by the experience of the driest portion of the year 1854, not only that the surface water diminished to a most serious and alarming degree, but that the supply of water to the pump also failed, and compelled the working of the engine for only 12 hours instead of 24 each day, until some new cuts had been made through the neighbouring swamps, which supplied for a short time an increased quantity.

28. The durability of this supply we had not sufficient means of testing, as rain soon after fell in large quantities, and relieved us temporarily from the anxiety which the fear of a drought, with its attendant distressing consequences, was calculated to produce. An examination of the book, in which the height of water in the tunnel is daily entered, shows, that from the 15th November to the 15th December, 1854, the average daily height was 8½ inches; that during that period it never attained a greater depth than 13 inches, while it fell as low as 5½, although the engine was at work, both night and day, all the time. When this is compared with the above statement, that it requires 17 inches to supply the town, the amount of inconvenience suffered in all but the lowest levels, may be estimated.

29. It would thus appear that, during an ordinary summer, we possess no means of ensuring a supply of water to the higher levels, even of that portion of the City to which water is laid on; that the supply to all manufacturers must almost infallibly be cut off for some months of each year; and that, if the summer should prove to be a dry one, we should find it impossible to give any water to the higher levels, and be able to give only a limited supply of a few hours out of the twenty-four, to the other parts of the town. The Return appended to the Engineer's Report shows the number, length, and size of the various new mains we have laid in the City, either to supply new districts or to increase and improve the supply already afforded; but a due consideration of our present incapacity permanently to supply any extra quantity of water, has compelled us very reluctantly to delay laying down mains to several large and important sections of the town, at present entirely dependent on their own resources. We hope, however, that during the course of the current year the reasons that influenced us in 1855 may be rendered less weighty, by the nearer prospect of an abundant supply from Botany. Appendix G.  
(A.)

30. A considerable portion of the pipes required for this latter purpose have arrived from England, and we regret to see them lying idle on the ground when their services are so much needed.

31. The regulations for the guidance of Water Carriers, which we found it necessary to promulgate in 1854, to check extortion and incivility, seem to have had the desired effect, the frequent complaints made against the conduct of those persons in that year having quite ceased in 1855. In addition to this, the Water Fund has received from the sale of water at the Hyde Park Fountain the sum of £1,152 10s. 3d., instead of £490, the sum for which it was leased in 1854, by which a nett gain has accrued to that fund of £475 6s. 3d.

32. Encouraged by the above successful experiment, we propose for the future, to retain in our own hands all the water fountains formerly leased for the year, being assured that the Water Fund will thus derive a large benefit; and that the public, while certainly suffering no pecuniary loss, will be, in all probability, gainers in other respects.

33. The supply of water to the shipping lying alongside the Circular Quay has been brought under our notice, and demands immediate reform. We propose laying a three-inch main along the Quay, and, by means of a hose, delivering the water at once into the ship requiring it, at a much lower charge than is now paid for the supply.

34. The annexed Report on the new Sydney Water Works, marked G, furnished to us by the present City Engineer, for the year 1855, details the various steps taken by us during that year, to provide the necessary machinery for introducing a supply from Botany, and bears us out in our previously-formed opinion, that the intended works at Botany, as proposed

proposed by the gentleman who at that period acted as Chief City Engineer, were on too expensive a scale, and susceptible of considerable modification. We called for Tenders, three several times, for the execution of the plans submitted to us by him, each time having modifications made to diminish the cost, and each time finding the amount of the lowest tender too great. The means by which the present City Engineer proposes considerably to diminish the outlay will form the subject of a Progress Report, which we shall have the honor of submitting to your Excellency as soon as the necessary plans, specifications, and estimates have been sufficiently matured. We trust that the estimates founded on them will be satisfactory to your Excellency, and, by meeting with the approval of the Parliament of New South Wales, will enable us to complete the introduction of a permanent supply of water, so much needed by the Inhabitants of Sydney.

## IV.—FINANCIAL.

Appendix A. 35. The appended Statement (A), prepared by the City Treasurer, shews the actual receipts and payments under the City, the Water, and the Sewerage accounts, during the year 1855; but, like the similar Statement for the preceding year, it does not give an exact account of the financial transactions properly belonging to the year. The receipts, for instance, include the sum of £11,977 7s. 6d., which belonged to the transactions of 1854, although outstanding at the end of that year. On the other hand, no part of the second half-year's rate for 1855 is included in the Treasurer's Statement; because, in consequence of the delay which took place in passing the rate, no part of it was collected during last year. Again: in the sum of £12,798 17s. 5d. appearing among the receipts, as transferred to the City Fund, being the share of salaries and office expenses due by the Sewerage and Water Funds for the years 1854 and 1855, an error of £1,130 14s. 6d. occurs, arising from the sum so transferred including a portion of the salaries for 1854, already charged to the Sewerage and Water Funds, as will appear by the annexed Schedule (B).

Appendix P.

36. The following Statement will show the real position of our financial affairs during the year 1855. The Distribution account of Salaries and Office Expenditure, on the same principle as hitherto adopted, is as follows:—

## DISTRIBUTION of Salaries and Office Expenditure.—1855.

	CITY.			SEWERAGE.			WATER.			TOTAL.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Commissioners .....	866	13	4	866	13	4	866	13	4	2,600	0	0
Secretary and Clerk .....	202	5	7	202	5	6	202	5	6	606	16	7
Treasurer and Clerks .....	325	0	0	325	0	0	325	0	0	975	0	0
Surveyor and Clerk .....	1,101	8	6	.....	.....	.....	.....	.....	.....	1,101	8	6
Solicitor.....	133	6	8	133	6	8	133	6	8	400	0	0
Inspector of Hackney Car- riages, &c. ....}	392	4	5	.....	.....	.....	.....	.....	.....	392	4	5
Clerk of Market .....	220	0	0	.....	.....	.....	.....	.....	.....	220	0	0
Officekeeper and Messenger ...	54	6	8	54	6	8	54	6	8	163	0	0
Engineer .....	.....	.....	.....	400	0	0	400	0	0	800	0	0
Assistant Engineers, &c.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. Hooper.....	.....	.....	.....	156	5	0	156	5	0	312	10	0
C. H. Mais.....	.....	.....	.....	170	0	6	170	0	6	340	1	0
J. T. Strong .....	.....	.....	.....	12	10	0	12	10	0	25	0	0
Jas. Cowlshaw .....	.....	.....	.....	41	13	4	41	13	4	83	6	8
E. Chirade.....	.....	.....	.....	.....	.....	.....	122	0	10	122	0	10
Inspector of Water Works } and Clerk to Engineers... }	.....	.....	.....	62	10	0	262	10	0	325	0	0
Inspector of Nuisances .....	.....	.....	.....	250	0	0	.....	.....	.....	250	0	0
Clerk in Engineer's Office.....	.....	.....	.....	86	2	2	86	2	2	172	4	4
Superintendent of Water Works	.....	.....	.....	.....	.....	.....	201	13	4	201	13	4
Inspector of Slaughter Houses	350	0	0	.....	.....	.....	.....	.....	.....	350	0	0
Total Salaries.....	3,645	5	2	2,760	13	2	3,034	7	4	9,440	5	8
Office Expenditure .....	717	18	10	426	10	5	426	10	5	1,570	19	8
Total Salaries and Office Ex- penditure .....	4,363	4	0	3,187	3	7	3,460	17	9	11,011	5	4

37. Substituting these amounts for the sums appearing in the Treasurer's Statement, and making the necessary corrections and cross-entries above referred to, the state of the Receipts and Expenditure properly belonging to the different accounts, individually and collectively, during the year 1855, will be as under:—

STATEMENT

SECOND YEARLY REPORT OF THE CITY COMMISSIONERS.

STATEMENT of the Aggregate Amount of Receipts and Expenditure on the City, Water, and Sewerage Accounts, belonging to the Year 1855, after the distribution of the Salaries and Office Expenditure among the different Accounts.

RECEIPTS.	CITY.			WATER.			SEWERAGE.			TOTAL.				
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		
Rates .....	17,768	12	5	.....	.....	.....	.....	.....	.....	17,768	12	5		
Watering Streets .....	506	2	3	.....	.....	.....	.....	.....	.....	506	2	3		
Fees and Fines .....	2,857	4	3	.....	.....	.....	.....	.....	.....	2,857	4	3		
Markets .....	6,350	14	6	.....	.....	.....	.....	.....	.....	6,350	14	6		
Privies .....	3,146	19	3	.....	.....	.....	.....	.....	.....	3,146	19	3		
Removal of Rubbish .....	146	19	8	.....	.....	.....	.....	.....	.....	146	19	8		
Colonial Government .....	10,000	0	0	27,380	0	0	95,750	0	0	133,130	0	0		
For Private Streets .....	959	17	9	.....	.....	.....	.....	.....	.....	959	17	9		
Diseased Animals .....	133	5	6	.....	.....	.....	.....	.....	.....	133	5	6		
Old Buildings.....	42	10	0	.....	.....	.....	.....	.....	.....	42	10	0		
Old Stores .....	219	0	1	.....	.....	.....	.....	.....	.....	219	0	1		
Premium on Debentures .....	1	5	0	.....	.....	.....	.....	.....	.....	1	5	0		
Debentures.....	8,900	0	0	.....	.....	.....	.....	.....	.....	8,900	0	0		
Water Rates .....	.....	.....	.....	6,284	8	9	.....	.....	.....	6,284	8	9		
Service Pipes .....	.....	.....	.....	54	3	4	.....	.....	.....	54	3	4		
Cancelling Bond.....	.....	.....	.....	45	0	0	.....	.....	.....	45	0	0		
Surcharge recovered .....	.....	.....	.....	1	13	1	.....	.....	.....	1	13	1		
Sale of Clay Pipes, Bricks, &c. ....	.....	.....	.....	.....	.....	.....	1,881	15	5	1,881	15	5		
Interest on Water Debentures received from Water Fund } .....	456	0	0	.....	.....	.....	.....	.....	.....	456	0	0		
Deduct charged in 1854, belonging to that year .....	11,977	7	6	.....	.....	.....	.....	.....	.....	11,977	7	6		
Sums due, but outstanding, 31st December, 1855 (as per Schedule C) .....	39,511	3	2	33,765	5	2	97,631	15	5	170,908	3	9		
.....	13,186	4	1	.....	.....	.....	.....	.....	.....	13,186	4	1		
Receipts for 1855 .....	52,697	7	3	33,765	5	2	97,631	15	5	184,094	7	10		
Balance 31st December, 1854, per First Yearly Report..	2,085	12	11	1,118	6	7	950	15	11	4,154	15	5		
Total Receipts, 1855 .....	£ 54,783	0	2	34,883	11	9	98,582	11	4	188,249	3	3		
<b>EXPENDITURE.</b>														
Salaries & Office Expenditure	4,363	4	0	3,460	17	9	3,187	3	7	11,011	5	4		
General Works .....	33,182	12	1	8,611	4	6	8,253	4	11	50,047	1	6		
Carters' Barracks .....	1,573	18	2	268	6	4	.....	.....	.....	1,842	4	6		
Pennant Hills .....	5,618	15	5	.....	.....	.....	.....	.....	.....	5,618	15	5		
Privies .....	3,421	18	3	.....	.....	.....	.....	.....	.....	3,421	18	3		
Lighting .....	2,552	18	9	.....	.....	.....	.....	.....	.....	2,552	18	9		
Interest .....	786	8	9	910	0	1	498	1	10	2,194	10	8		
Law .....	51	5	6	900	0	0	.....	.....	.....	951	5	6		
Lime-street Wharf.....	3,465	0	0	.....	.....	.....	.....	.....	.....	3,465	0	0		
City Markets .....	2,192	9	10	.....	.....	.....	.....	.....	.....	2,192	9	10		
Horses.....	59	0	0	.....	.....	.....	.....	.....	.....	59	0	0		
Clocks .....	18	15	0	.....	.....	.....	.....	.....	.....	18	15	0		
Diseased Animals .....	30	10	0	.....	.....	.....	.....	.....	.....	30	10	0		
Old Buildings.....	42	10	0	.....	.....	.....	.....	.....	.....	42	10	0		
Relinquishing Contract .....	100	0	0	.....	.....	.....	.....	.....	.....	100	0	0		
Sinking Fund.....	100	0	0	.....	.....	.....	.....	.....	.....	100	0	0		
Miscellaneous .....	3	14	6	.....	.....	.....	.....	.....	.....	3	14	6		
Lachlan Swamp .....	.....	.....	.....	1,910	16	0	.....	.....	.....	1,910	16	0		
Botany Works .....	.....	.....	.....	869	16	8	.....	.....	.....	869	16	8		
Survey of City .....	.....	.....	.....	701	4	5	705	9	9	1,406	14	2		
Report on Water .....	.....	.....	.....	21	0	0	.....	.....	.....	21	0	0		
Instruments .....	.....	.....	.....	22	19	9	27	19	9	50	19	6		
Loss of Office .....	.....	.....	.....	10	8	4	10	8	4	20	16	8		
Brick Plant .....	.....	.....	.....	.....	.....	.....	6,031	5	1	6,031	5	1		
Main Sewers .....	.....	.....	.....	.....	.....	.....	77,261	3	4	77,261	3	4		
Interest on Water Debentures .....	.....	.....	.....	456	0	0	.....	.....	.....	456	0	0		
.....	57,563	0	3	18,142	13	10	95,974	16	7	171,680	10	8		
Debentures on hand .....	.....	.....	.....	.....	.....	.....	4,180	0	0	4,180	0	0		
Expenditure, 1855.....	57,563	0	3	18,142	13	10	100,154	16	7	175,860	10	8		
Receipts, 1855 .....	54,783	0	2	34,883	11	9	98,582	11	4	188,249	3	3		
Balance, 31st December, 1855, Dr.....	2,780	0	1	.....	.....	.....	1,572	5	3	4,352	5	4		
Ditto, Cr. ....	.....	.....	.....	16,740	17	11	.....	.....	.....	16,740	17	11		
Aggregate Balance due by Bank, 31st December, 1855.....												£12,388	12	7

38. That this result agrees with the Treasurer's printed statement of Receipts and  
**Appendix A.** Payments for 1855 (A) will appear by the following schedule of the aggregate balance:—

AGGREGATE balance 31st December, 1855 as per Treasurer's Printed Statement (A)  
 after making the necessary cross entries.

1855.		£	s.	d.	£	s.	d.	£	s.	d.
<b>CITY FUND.</b>										
Balance 31st December, .....	Dr.				14,835	9	8			
Cross entries, Schedule (B).....	Dr.	1,130	14	6						
Sums outstanding 31st December, Schedule (C) .....	Cr.	13,186	4	1						
					12,055	9	7			
Balance 31st December, .....	Dr.				2,780	0	1			
<b>WATER.</b>										
Balance 31st December, .....	Cr.	16,055	10	8						
Cross entries, Schedule (B).....	Cr.	685	7	3						
Balance 31st December, .....	Cr.							16,740	17	11
<b>SEWERAGE.</b>										
Balance 31st December, .....	Dr.	2,017	12	6						
Cross entries, Schedule (B) .....	Cr.	445	7	3						
Balance 31st December, .....	Dr.				1,572	5	3			
Balances .....	Dr.							4,352	5	4
<b>AGGREGATE BALANCE.</b>										
31st December, 1855, due by the Bank, as per Distribution Account .....								12,388	12	7

39. The liabilities of the Commissioners at the 31st December, 1855, are as follows  
 viz. :—

CITY FUND.		£	s.	d.	£	s.	d.
Debentures.....		8,900	0	0			
Less, Sinking Fund .....		100	0	0			
Liabilities of City Fund .....					8,800	0	0
<b>WATER.</b>							
Colonial Government.....		37,380	0	0			
Debentures, borrowed for water purposes.....		7,600	0	0			
Liabilities of Water Fund.....					44,980	0	0
<b>SEWERAGE.</b>							
Colonial Government.....					105,750	0	0
<b>AGGREGATE LIABILITIES</b> of the Commissioners, 31st December, 1855 .....					159,530	0	0

40. The transmission of this Report has been somewhat delayed, in consequence of the change which we have found it necessary to make in the office of City Engineer. We were desirous to allow our present Engineer sufficient time to make himself fully acquainted with the works which had been carried out under the direction of his predecessor in office, before calling on him for his report, and to finish the quarterly measurement to the end of March, a copy of which is now appended, to which we have the satisfaction to request your Excellency's attention, as it shows that, after a most careful measurement and calculation of the whole sewerage works, from the commencement to the present time, Mr. Randle has never been paid to the full extent of the work performed, and that there is still a considerable balance in our hands. Appendix F.  
(B.)

41. We have appended plans (I K) shewing, at a glance, the extent of the sewerage works now carried out, and the water pipes laid in the City, to the 31st December last. Appendix I.  
K.

GILB. ELLIOTT, Chief Commissioner,  
F. O. DARVALL, }  
JOHN RAE, } Commissioners.

Signed by the Commissioners for the City of Sydney, and sealed with their seal, this 25th day of April, A.D., 1856.

CHAS. H. WOOLCOTT,  
Secretary.

APPENDIX.

LIST OF DOCUMENTS FORMING THE APPENDIX.

- A. Printed Statement of Receipts and Payments during 1855.
- B. Explanation of the Cross-entry of £12,798 17s. 5d., carried to the City Fund from the Sewerage and Water Funds.
- C. Sums outstanding at 31st December, 1855.
- D. Surveyor's Report of City Improvements during 1855.
- E. Specification for Foot-pavements.
- F. Engineer's Report on the progress of Sewerage Works.
- F. (A.) List of Repairs to Drains, &c., during 1855.
- F. (B.) Quarterly Measurement of Sewerage Works to 31st March, 1856.
- F. (C.) Progress in Trigonometrical Survey of the City to 31st December, 1855.
- G. Engineer's Report on Water Works.
- G. (A.) List of new Water Mains laid during 1855.
- H. Plan shewing the extent of City Improvements during 1855.
- I. Plan shewing the progress of Sewerage Works to 31st March, 1856.
- K. Plan shewing the Water Mains laid in the City to 31st December, 1855.

## 10 APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS.

## APPENDIX A.

STATEMENT of the RECEIPTS and EXPENDITURE of the Commissioners of the City of Sydney, for the year ending 31st December, 1855 :—

RECEIPTS ON ACCOUNT OF THE CITY FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
<b>CITY RATE.</b>	£ s. d.	£ s. d.	£ s. d.
Raised by Assessment under the authority of the Act of Council, 17 Victoria, No. 36 .....	23 5 2	.....	23 5 2
Raised by Assessment under the authority of the Act of Council, 18 Victoria, No. 31 .....	8,651 15 0	9,093 12 3	17,745 7 3
	8,675 0 2	9,093 12 3	17,768 12 5
<b>WATERING STREET RATE.</b>			
Raised by Assessment under the authority of the Act of Council, 18 Victoria, No. 30 .....	206 13 6	299 8 9	506 2 3
<b>FEES AND FINES.</b>			
Under Building and Police Acts.....	605 11 0	460 12 0	1,066 3 0
Slaughter Houses.....	179 0 9	208 1 0	387 1 9
Hackney Carriage Licenses.....	407 0 0	18 0 0	425 0 0
Carters' Licenses .....	572 0 0	61 0 0	633 0 0
Breach of By-laws .....	66 9 6	98 3 0	164 12 6
Distress Warrants .....	81 19 0	99 8 0	181 7 0
	1,912 0 3	945 4 0	2,857 4 3
<b>CITY MARKETS.</b>			
George and Campbell-street Markets ...	2,619 4 0	2,524 10 6	5,143 14 6
Hay Market.....	415 0 0	415 0 0	830 0 0
Market Wharf.....	144 8 4	232 11 8	377 0 0
	3,178 12 4	3,172 2 2	6,350 14 6
Cleansing Water-closets.....	2,306 9 10	840 9 5	3,146 19 3
Removal of Rubbish .....	111 19 8	35 0 0	146 19 8
Endowment from the Colonial Government	5,000 0 0	5,000 0 0	10,000 0 0
Repayment of Advances made to Water and Sewerage Funds for the years 1854 and 1855.....	.....	12,798 17 5	12,798 17 5
Repayment for forming streets .....	158 1 0	801 16 9	959 17 9
Repayment for Removal of Diseased Animals .....	126 15 6	6 10 0	133 5 6
Repayment for Removal of Dilapidated Buildings.....	.....	42 10 0	42 10 0
Proceeds of Sale of Old Stores.....	215 12 0	3 8 1	219 0 1
Premium on Debentures.....	1 5 0	.....	1 5 0
<b>TOTAL AMOUNT OF RECEIPTS...£</b>	<b>21,892 9 3</b>	<b>33,038 18 10</b>	<b>54,931 8 1</b>

EXPENDITURE



## APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS. 11

EXPENDITURE ON ACCOUNT OF CITY FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
	£ s. d.	£ s. d.	£ s. d.
SALARIES OF COMMISSIONERS .....	1,300 0 0	1,300 0 0	2,600 0 0
SALARIES OF OFFICERS.			
Office of Secretary .....	296 16 7	310 0 0	606 16 7
„ Treasurer .....	487 10 0	487 10 0	975 0 0
„ Surveyor .....	536 8 6	565 0 0	1,101 8 6
„ Solicitor .....	200 0 0	200 0 0	400 0 0
„ Inspector of Nuisances.....	175 0 0	217 4 5	392 4 5
„ Inspector of Slaughter Houses	175 0 0	175 0 0	350 0 0
„ Clerk of George-street Market	110 0 0	110 0 0	220 0 0
„ Office Keeper and Messenger	75 0 0	88 0 0	163 0 0
	2,055 15 1	2,152 14 5	4,208 9 6
OFFICE EXPENSES.			
Rent .....	250 0 0	250 0 0	500 0 0
Stationery .....	155 5 9	144 3 6	299 9 3
Printing .....	112 7 6	97 9 0	209 16 6
Advertising and Newspapers .....	83 10 4	47 7 7	130 17 11
Fees to Auditors .....	31 10 0	31 10 0	63 0 0
Fuel and Light .....	14 11 10	13 10 0	28 1 10
Furnishing .....	31 14 7	41 14 4	73 8 11
Extra Services .....	156 7 3	109 18 0	266 5 3
	835 7 3	735 12 5	1,570 19 8
GENERAL CITY WORKS.			
Wages.....	7,055 19 8	2,457 5 3	9,513 4 11
Kerbing and Guttering .....	6,765 16 8	3,592 0 7	10,357 17 3
Street Works .....	2,918 4 8	7,401 17 2	10,320 1 10
Tools and Repairs .....	164 6 1	323 9 6	487 15 7
Cleansing Streets and Removal of Rubbish .....		1,866 1 0	1,866 1 0
Metal .....	114 2 0	146 19 3	261 1 3
Watering Streets .....	130 0 0	49 1 0	179 1 0
Fencing and Timber .....	68 14 4	6 3 11	74 18 3
Notice Boards .....		43 18 9	43 18 9
Cartage of Metal .....		70 13 9	70 13 9
Miscellaneous Expenses .....	7 3 6	0 15 0	7 18 6
	17,224 6 11	15,958 5 2	33,182 12 1
DEPOT, CARTERS' BARRACKS.			
Forage .....	701 10 11	695 2 11	1,396 13 10
Horses .....	41 5 0		41 5 0
Farricry, Harness, &c. ....	70 16 10	65 2 6	135 19 4
	813 12 9	760 5 5	1,573 18 2
PENNANT HILLS QUARRY.			
Wages.....	1,022 16 11	14 8 0	1,037 4 11
Metal .....	977 8 5	3,195 0 0	4,172 8 5
Boat Hire, Wharfage, &c. ....	354 15 0	54 7 1	409 2 1
	2,355 0 4	3,263 15 1	5,618 15 5
CLEANSING WATER-CLOSETS.			
Wages of Inspector and Labourer .....	151 8 3	153 18 0	305 6 3
Contractor for Cleansing Closets .....	2,298 16 0	695 3 2	2,993 19 2
Tools, &c. ....	9 17 0	112 15 10	122 12 10
	2,460 1 3	961 17 0	3,421 18 3
Amount carried forward.....	27,044 3 7	25,132 9 6	52,176 13 1

EXPENDITURE

## 12 APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS.

EXPENDITURE ON ACCOUNT OF CITY FUND.	30 JUNE.			31 DECEMBER.			TOTAL AMOUNT.																																																																																				
	£	s.	d.	£	s.	d.	£	s.	d.																																																																																		
Amount brought forward.....	27,044	3	7	25,132	9	6	52,176	13	1																																																																																		
Lighting the City with Gas .....	1,283	2	4	1,269	16	5	2,552	18	9																																																																																		
Interest Expenses .....	381	1	7	405	7	2	786	8	9																																																																																		
Law Expenses .....	51	5	6	.....			51	5	6																																																																																		
Wharf, Soldiers' Point .....	3,465	0	0	.....			3,465	0	0																																																																																		
Repairs, &c., of City Markets .....	89	17	8	2,102	12	2	2,192	9	10																																																																																		
Purchase of Horses.....	39	0	0	20	0	0	59	0	0																																																																																		
Regulating City Clocks.	12	10	0	6	5	0	18	15	0																																																																																		
Removing Diseased Animals from the Streets .....	6	10	0	24	0	0	30	10	0																																																																																		
Removal of Dangerous Buildings .....	42	10	0	.....			42	10	0																																																																																		
Consideration for relinquishing a contract .....	.....			100	0	0	100	0	0																																																																																		
Sinking Fund.....	.....			100	0	0	100	0	0																																																																																		
Miscellaneous.....	0	14	6	3	0	0	3	14	6																																																																																		
TOTAL AMOUNT OF EXPENDITURE...	32,415	15	2	29,163	10	3	61,579	5	5																																																																																		
<table border="0" style="width: 100%;"> <tr> <td colspan="7">TOTAL AMOUNT OF EXPENDITURE.....</td> <td>61,579</td> <td>5</td> <td>5</td> </tr> <tr> <td rowspan="3">Liabilities</td> <td rowspan="3">{</td> <td colspan="2">Joint Stock Bank, 31 December, 1854, .....</td> <td>17,087</td> <td>12</td> <td>4</td> <td rowspan="3"><hr/></td> <td rowspan="3">24,687</td> <td rowspan="3">12</td> <td rowspan="3">4</td> </tr> <tr> <td colspan="2">Debentures and Mortgages ...</td> <td>7,600</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="2"></td> <td colspan="3"></td> </tr> <tr> <td colspan="7">TOTAL AMOUNT OF RECEIPTS .....</td> <td>54,931</td> <td>8</td> <td>1</td> </tr> <tr> <td rowspan="3">Liabilities</td> <td rowspan="3">{</td> <td colspan="2">Joint Stock Bank, 31 December, 1855 .....</td> <td>14,835</td> <td>9</td> <td>8</td> <td rowspan="3"><hr/></td> <td rowspan="3">31,335</td> <td rowspan="3">9</td> <td rowspan="3">8</td> </tr> <tr> <td colspan="2">Debentures and Mortgages ...</td> <td>16,500</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="2"></td> <td colspan="3"></td> </tr> <tr> <td colspan="7"></td> <td>86,266</td> <td>17</td> <td>9</td> </tr> <tr> <td colspan="7"></td> <td>86,266</td> <td>17</td> <td>9</td> </tr> </table>										TOTAL AMOUNT OF EXPENDITURE.....							61,579	5	5	Liabilities	{	Joint Stock Bank, 31 December, 1854, .....		17,087	12	4	<hr/>	24,687	12	4	Debentures and Mortgages ...		7,600	0	0						TOTAL AMOUNT OF RECEIPTS .....							54,931	8	1	Liabilities	{	Joint Stock Bank, 31 December, 1855 .....		14,835	9	8	<hr/>	31,335	9	8	Debentures and Mortgages ...		16,500	0	0													86,266	17	9								86,266	17	9
TOTAL AMOUNT OF EXPENDITURE.....							61,579	5	5																																																																																		
Liabilities	{	Joint Stock Bank, 31 December, 1854, .....		17,087	12	4	<hr/>	24,687	12	4																																																																																	
		Debentures and Mortgages ...		7,600	0	0																																																																																					
TOTAL AMOUNT OF RECEIPTS .....							54,931	8	1																																																																																		
Liabilities	{	Joint Stock Bank, 31 December, 1855 .....		14,835	9	8	<hr/>	31,335	9	8																																																																																	
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							86,266	17	9																																																																																		
							86,266	17	9																																																																																		

EDWD. LORD,  
City Treasurer.

City Treasurer's Office,  
Sydney, 12th January, 1856.

RECEIPTS

## APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS. 13

RECEIPTS ON ACCOUNT OF WATER FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
<b>WATER WORKS.</b>	£ s. d.	£ s. d.	£ s. d.
Rent of Fountain, Dockyard .....	100 10 0	100 10 0	201 0 0
"    Soldiers' Point .....	83 6 8	166 13 4	250 0 0
"    South Head Road...	30 10 0	25 5 6	55 15 6
Sale of Water, Hyde Park .....	546 10 6	605 19 9	1,152 10 3
Laid on to Houses in the City .....	1,179 16 1	3,445 6 11	4,625 3 0
	1,940 13 3	4,843 15 6	6,284 8 9
Repayment for laying Service Pipes .....	54 3 4	.....	54 3 4
Consideration for cancelling Bond.....	45 0 0	.....	45 0 0
Surcharges recovered.....	1 13 1	.....	1 13 1
<b>TOTAL AMOUNT OF RECEIPTS...</b>	<b>2,041 9 8</b>	<b>4,843 15 6</b>	<b>6,385 5 2</b>
<b>EXPENDITURE ON ACCOUNT OF WATER FUND.</b>	<b>30 JUNE.</b>	<b>31 DECEMBER.</b>	<b>TOTAL AMOUNT.</b>
	£ s. d.	£ s. d.	£ s. d.
Salaries of Officers.....	692 1 4	760 13 10	1,452 15 2
<b>GENERAL WORKS.</b>			
Wages .....	986 7 5	754 9 6	1,740 16 11
Iron Pipes.....	1,918 11 7	4,030 8 0	5,948 19 7
Fountains, Hyde Park and South Head Road.....	112 10 0	74 0 0	186 10 0
Store and Depôt .....	46 19 0	.....	46 19 0
Old Lead .....	142 6 8	.....	142 6 8
Cartage .....	.....	31 2 6	31 2 6
Tools, Repairs, & Miscellaneous expenses	189 11 3	324 18 7	514 9 10
	3,396 5 11	5,214 18 7	8,611 4 6
<b>LACHLAN SWAMP.</b>			
Wages .....	1,010 4 9	350 2 0	1,360 6 9
Fuel .....	107 19 4	68 14 9	176 14 1
Timber and Iron Work .....	187 12 0	116 18 2	304 10 2
Cartage .....	.....	29 5 0	29 5 0
Repair of Road.....	20 0 0	20 0 0	40 0 0
	1,325 16 1	584 19 11	1,910 16 0
<b>BOTANY WORKS.</b>			
Wages .....	152 16 0	67 7 1	220 3 1
Fencing, Timber, and Miscellaneous .....	55 4 8	594 8 11	649 13 7
	208 0 8	661 16 0	869 16 8
<b>DEPOT, CARTERS' BARRACKS.</b>			
Forage .....	233 16 6	.....	233 16 6
Horses .....	13 15 0	.....	13 15 0
Farriery, Harness, &c. ....	20 14 10	.....	20 14 10
	268 6 4	.....	268 6 4
<b>SURVEY OF THE CITY.</b>			
Maps .....	168 5 2	152 4 2	320 9 4
Surveyors.....	145 13 5	180 1 11	325 15 4
Stations and Sundries.....	43 8 10	11 10 11	54 19 9
	357 7 5	343 17 0	701 4 5
<b>Amount carried forward.....</b>	<b>6,247 17 9</b>	<b>7,566 5 4</b>	<b>13,814 3 1</b>

## 14 APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS:

EXPENDITURE ON ACCOUNT OF WATER FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
	£ s. d.	£ s. d.	£ s. d.
Amount brought forward.....	6,249 17 9	7,566 5 4	13,814 3 1
Interest Expenses .....	160 0 0	750 0 1	910 0 1
Law Expenses .....	.....	900 0 0	900 0 0
Report on Water .....	21 0 0	.....	21 0 0
Instruments .....	22 19 9	.....	22 19 9
Gratuity for loss of Office .....	.....	10 8 4	10 8 4
Repayment for advances made by City Fund .....	.....	7,581 12 3	7,581 12 3
<b>TOTAL AMOUNT OF EXPENDITURE.</b>	<b>6,451 17 6</b>	<b>16,808 6 0</b>	<b>23,260 3 6</b>
		£ s. d.	£ s. d.
Liability to the Colonial Government for Advances, 31st of December, 1854.....		10,000 0 0	
EXPENDITURE as above .....		23,260 3 6	
Balance due by Joint Stock Bank, 31st of December, 1855		16,055 10 8	49,315 14 2
Liability to the Colonial Government for Advances, 31st of December, 1855 .....		37,380 0 0	
RECEIPTS as above .....		6,385 5 2	
Balance due by Joint Stock Bank, 31st of December, 1854		5,550 9 0	49,315 14 2

City Treasurer's Office,  
Sydney, 12th January, 1856.

EDWD. LORD,  
City Treasurer.

RECEIPTS ON ACCOUNT OF SEWERAGE FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
	£ s. d.	£ s. d.	£ s. d.
Proceeds of Sale of Pipes .....	36 17 2	86 9 9	123 6 11
Proceeds of Sale of Bricks, and Rent of Cottage.....	.....	1,677 3 0	1,677 3 0
Repayment for Making and Repairing Drains .....	.....	81 5 6	81 5 6
<b>TOTAL AMOUNT OF RECEIPTS...</b>	<b>36 17 2</b>	<b>1,844 18 3</b>	<b>1,881 15 5</b>
EXPENDITURE ON ACCOUNT OF SEWERAGE FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
	£ s. d.	£ s. d.	£ s. d.
Salaries of Officers.....	553 7 2	625 13 10	1,179 1 0
<b>GENERAL WORKS.</b>			
Wages.....	2,353 17 3	789 14 7	3,143 11 10
Drains and Repairs .....	510 13 1	270 14 1	781 7 2
Pipes .....	4,015 0 1	.....	4,015 0 1
Store and Tools .....	53 6 2	.....	53 6 2
Cement.....	55 0 0	.....	55 0 0
Timber and Fencing .....	72 14 0	101 12 3	174 6 3
Wharfage and Miscellaneous.....	30 13 5	.....	30 13 5
	7,091 4 0	1,162 0 11	8,253 4 11
<b>Amount carried forward...</b>	<b>7,644 11 2</b>	<b>1,787 14 9</b>	<b>9,432 5 11</b>

EXPENDITURE

## APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS. 15

EXPENDITURE ON ACCOUNT OF SEWERAGE FUND.	30 JUNE.	31 DECEMBER.	TOTAL AMOUNT.
	£ s. d.	£ s. d.	£ s. d.
Amount brought forward.....	7,644 11 2	1,787 14 9	9,432 5 11
<b>BRICK PLANT.</b>			
Wages of Labourers.....	439 19 4	453 12 2	893 11 6
Making Bricks.....	744 16 0	1,584 18 10	2,329 14 10
Fuel.....	604 11 0	828 6 1	1,432 17 1
Tools .....	16 17 6	23 15 9	40 13 3
Cartage .....	208 12 11	609 4 10	817 17 9
Covering for Bricks.....	96 5 11	73 3 3	169 9 2
Charges for Valuation of Plant .....	42 15 6	.....	42 15 6
Rent.....	17 10 0	100 0 0	117 10 0
Machine for Making Bricks .....	.....	70 0 0	70 0 0
Timber and Sundries .....	34 19 2	81 16 10	116 16 0
	2,206 7 4	3,824 17 9	6,031 5 1
<b>SURVEY OF THE CITY.</b>			
Wages .....	168 5 2	152 4 2	320 9 4
Surveyor .....	149 18 9	180 1 11	330 0 8
Stations and Sundries .....	43 8 10	11 10 11	54 19 9
	361 12 9	343 17 0	705 9 9
<b>MAIN SEWERS.</b>			
Making Sewers .....	1,500 0 0	70,987 17 7	72,487 17 7
Castings for Sewers.....	.....	4,773 5 9	4,773 5 9
	1,500 0 0	75,761 3 4	77,261 3 4
Interest Expenses .....	159 19 11	338 1 11	498 1 10
Instruments, Maps, &c. ....	27 19 9	.....	27 19 9
Gratuity for Loss of Office.....	.....	10 8 4	10 8 4
Repayment of Advances made by the City Fund .....	.....	5,217 5 2	5,217 5 2
<b>TOTAL AMOUNT OF EXPENDITURE...£</b>	<b>11,900 10 11</b>	<b>87,283 8 3</b>	<b>99,183 19 2</b>
		£ s. d.	£ s. d.
Liability to Colonial Government for Advances, 31 Dec., 1854.....		10,000 0 0	
EXPENDITURE as above .....		99,183 19 2	
Debentures on hand, less discount.....		4,180 0 0	
			113,363 19 2
Liability to Colonial Government for Cash and Debentures, 31 Dec., 1855 .....		105,750 0 0	
RECEIPTS as above .....		1,881 15 5	
Balance due by Joint Stock Bank, 31 Dec., 1854.....		3,714 11 3	
Balance due to Joint Stock Bank, 31 Dec., 1855.....		2,017 12 6	
			113,363 19 2

EDWD. LORD,  
City Treasurer.

City Treasurer's Office,  
Sydney, 12th January, 1856.

APPENDIX

## 16 APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS

## APPENDIX B.

The sum of £12,798 17s. 5d., transferred to the credit of the City Fund Account, from the Sewerage and Water Accounts, as per Treasurer's Printed Statement for 1855, is composed of the following items, viz. :—

	SEWERAGE.			WATER.			CITY.		
	£	s.	d.	£	s.	d.	£	s.	d.
Proportion of Salaries and Office Expenses due by Sewerage and Water Accounts for 1854 .....	3,209	2	7	3,679	6	4			
Interest on Debentures borrowed for water purposes, to 31st December, 1854 .....				1,438	3	4			
Total for 1854.....	3,209	2	7	5,117	9	8	8,326	12	3
Proportion of Salaries and Office Expenses for 1855 .....	2,008	2	7	2,008	2	7			
Interest on Water Debentures, 1855 .....				456	0	0			
Total for 1855 .....	2,008	2	7	2,464	2	7	4,472	5	2
Total for 1854 and 1855 .....							12,798	17	5
In the above amount for Salaries, &c., transferred for 1854, a twofold error occurs.									
The amounts stated in our last Report are	3,209	2	8	3,679	6	5			
From which deducting the above.....	3,209	2	7	3,679	6	4			
There remains a difference of .....	0	0	1	0	0	1			
While from the sums above transferred there should have been deducted a portion already charged to the Sewerage and Water in the Treasurer's Printed Statement for 1854.....	445	7	4	685	7	4			
Total over transferred.....	445	7	3	685	7	3	1,130	14	6
Total amount of cross entries which should have been transferred by Treasurer in his account for 1855, instead of the above sum of £12,798 17s. 5d. actually transferred .....							11,668	2	9

## APPENDIX C.

STATEMENT of sums outstanding at 31st December, 1855.

	£	s.	d.	£	s.	d.
Due by Colonial Government for opening streets through Government land, 1853 and 1854 .....	1,510	13	9			
Ditto ditto for removing dead animals, 1855 .....		24	0			
Rates from 1 July to 31 December, 1855, uncollected.....	12,800	0	0			
Watering streets, to be raised by rate .....	870	0	0			
				15,204	13	9
Borrowed by Debentures .....	8,900	0	0			
Expended of this sum—						
For Campbell-street Market, repairs ..	1,224	0	6			
For George-street Market, repairs .....	2,192	9	10			
For Lime-street Wharf .....	3,465	0	0			
Total expended .....	6,881	10	4			
Balance to expend 31st December, 1855 .....				2,018	9	8
Balance outstanding in favor of the Commissioners, 31st December, 1855 .....				13,186	4	1

APPENDIX

APPENDIX D.

GENERAL CITY IMPROVEMENTS.—1855.

The Expenditure of Wages during the Year 1855 has been distributed among the following Works, and Improvements.

NAME AND LOCALITY.	REMARKS.	Excavation Cubic Feet.	Filling in Cubic Feet.	Ballast, &c. Tons.	Gravel, &c. Tons.	Blue Metal, Tons.	Rough Guttering, Lineal Feet.	Water Channels, Lineal Feet.	EXPENDITURE.
									£ s. d.
Abercrombie-place . . . . .	Opening channels . . . . .	..	..	..	..	..	..	180	0 6 6
Albion-street . . . . .	Erecting fence . . . . .	..	..	..	..	..	..	..	2 0 0
Anne-street . . . . .	Opening channels . . . . .	..	..	..	..	..	..	150	0 7 0
Argyle-street . . . . .	Repairs and fencing . . . . .	..	..	53	..	12	..	..	9 0 0
Bathurst-street . . . . .	Repairs, gravel, rough gut- tering, and backing kerb . . . . .	..	..	76	20	..	396	..	35 9 9
Bent-street . . . . .	Repairing gutter . . . . .	..	..	..	..	..	..	..	1 17 0
Boomerang-street . . . . .	Repairs and opening channels . . . . .	..	..	147	..	..	..	6,129	56 2 10½
Bligh-street . . . . .	Repairing crossing . . . . .	..	..	6	..	..	..	..	3 1 0
Botany-street, Chippen- dale . . . . .	Repairing, and metalling, } and opening channels . . . . .	..	..	356	..	399	..	852	106 0 0
Botany-street, Surry Hills . . . . .	Repairs . . . . .	..	..	..	6	..	..	..	0 14 0
Botany Road, Surry Hills . . . . .	Repairs . . . . .	..	..	..	..	..	..	..	1 11 0
Bourke-street . . . . .	Cutting down roading, and } opening channels . . . . .	2,240	..	..	..	..	..	300	34 10 6
Bridge-street . . . . .	Repairs, filling in footway, } and backing kerb . . . . .	..	13,080	32	..	..	..	..	71 2 3
Brisbane-street . . . . .	Repairs and opening channels . . . . .	..	..	17	..	..	..	900	6 12 0
Brougham-place . . . . .	Opening channels . . . . .	..	..	..	..	..	..	180	0 7 0
Brougham-street . . . . .	Repairs and opening channels . . . . .	..	..	50	..	..	..	450	3 10 0
Burton-street . . . . .	Repairs . . . . .	..	..	15	..	..	..	..	0 14 0
Cambridge-street . . . . .	Forming and repairing, and } rough guttering . . . . .	..	..	413	..	..	786	..	53 9 6
Campbell's-lane . . . . .	Repairs . . . . .	..	..	..	14	..	..	..	1 15 0
Campbell-street . . . . .	Gutter crossings . . . . .	..	..	28	..	..	123	..	15 10 9
Carter's Barracks . . . . .	Wages of stablemen, &c. . . . .	..	..	..	..	..	..	..	271 13 3
Castlereagh-street . . . . .	Repairs and rough guttering . . . . .	..	..	95	..	..	45	..	18 13 0
Charlotte-place . . . . .	Repairs . . . . .	..	..	95	..	..	..	..	6 9 0
Chippendale-street . . . . .	Opening channels . . . . .	..	..	..	..	..	..	540	0 19 6
City generally . . . . .	Wages of overseer and store- keeper, and minor works . . . . .	..	..	..	..	..	..	..	460 15 0
City Wharf, Soldiers' Point . . . . .	Wages of wharfinger, re- pairs, and stacking metal . . . . .	..	..	..	..	..	..	..	67 4 2
Clarence-lane . . . . .	Rough guttering . . . . .	..	..	..	..	..	315	..	30 16 3
Clarence-street . . . . .	Cutting down and forming, } cartage of flags, and open- ing channels . . . . .	1,495	..	..	..	..	..	450	37 2 6
Cleaning streets . . . . .	34,552 loads of rubbish have been removed from var- ious streets, &c. . . . .	..	..	..	..	..	..	..	3,142 7 4½
Cleansing water-closets . . . . .	Wages of labourer assisting inspector . . . . .	..	..	..	..	..	..	..	105 8 0
Cleveland-street . . . . .	Gutter crossing . . . . .	..	..	45	..	..	70	..	23 4 3
College-street . . . . .	Repairs and opening channels . . . . .	..	..	..	163	..	..	1,104	17 4 10½
Cooper-street . . . . .	Repairs . . . . .	..	..	..	..	..	..	..	10 7 0
Crescent-street . . . . .	Ditto . . . . .	..	..	96	..	..	..	..	6 13 0
Crown-street . . . . .	Repairs and rough guttering . . . . .	..	..	178	..	..	75	..	28 14 0
Crown-street, Miller's Point . . . . .	Cutting down and forming . . . . .	..	..	..	..	..	..	..	118 13 3
Cumberland-street . . . . .	Forming, repairing, backing } kerb, and rough guttering . . . . .	5,800	93	613	..	..	156	..	90 8 3
Darlinghurst Road . . . . .	Repairs . . . . .	..	..	336	..	..	..	..	29 19 0
Devonshire-street . . . . .	Repairs and opening channels . . . . .	..	..	337	..	..	..	2,772	32 0 0
Domain Terrace . . . . .	Forming rough guttering . . . . .	..	..	..	175	..	399	..	35 16 0
Dowling-street . . . . .	Repairs and gutter crossing . . . . .	..	..	188	50	..	65	..	37 9 4½
Druitt-street . . . . .	Forming and repairing, and } backing kerb . . . . .	..	..	416	..	20	..	..	54 1 6
Elizabeth-street . . . . .	Repairs and hoardings . . . . .	..	..	2,552	24	..	..	..	237 11 1½
Erskine-street . . . . .	Repairs . . . . .	..	..	..	271	..	..	..	21 2 6
Essex-lane . . . . .	Backing kerbing . . . . .	..	..	120	..	..	..	..	6 14 9
Essex-street . . . . .	Repairs . . . . .	..	..	133	36	..	..	..	21 14 3
Fitzroy-street . . . . .	Opening channels . . . . .	..	..	..	..	..	..	741	3 18 0
Forbes-street . . . . .	Repairs . . . . .	..	..	21	..	..	..	..	2 17 0
George-street . . . . .	Repairing and metalling . . . . .	..	..	37	140	1,008	..	..	216 16 0
George-street Market . . . . .	Wages of Constable . . . . .	..	..	..	..	..	..	..	107 2 7
Gloucester-street . . . . .	Forming, repairing, and } rough guttering . . . . .	..	..	602	..	..	1,371	..	114 8 0
Goulburn-street . . . . .	Repairs . . . . .	..	..	..	..	36	..	..	7 12 6
Gravel . . . . .	Excavating and screening } 923 Tons, filling in pits, and Watchman . . . . .	..	..	..	..	..	..	..	166 15 0
Harrington-street . . . . .	Rough guttering . . . . .	..	..	332	..	..	777	..	67 13 6
Harris street . . . . .	Opening channels . . . . .	..	..	..	..	..	..	180	0 7 0
Haymarket . . . . .	Repairing roadways, and } wages of Watchman . . . . .	..	..	10	..	..	..	..	30 19 0
Carried forward . . . . .		9,535	13,173	7,399	904	1,475	4,578	14,928	6,035 9 10½

## GENERAL CITY IMPROVEMENTS—continued.

NAME AND LOCALITY.	REMARKS.	Excavation, Cubic Feet.	Filling in, Cubic Feet.	Ballast, &c., Tons.	Gravel, &c., Tons.	Blue Metal, Tons.	Rough Guttering- Lineal Feet.	Water Channels, Lineal Feet.	EXPENDITURE.	
									£	s. d.
	Brought forward ..	9,535	13,173	7,399	904	1,475	4,578	14,928	6,035	9 10 3
Hunter-street .....	Repairs and backing kerb ..			76	80				20	14 6
Hutchinson-street .....	Repairs and rough guttering ..			32			153		17	0 0
Hyde Park .....	Repairs round Fountain ..								1	5 0
Jenkins-street .....	Forming roadway, and lay- ing brick gutter ..			32					20	15 3
Kensington-street .....	Repairs ..			134					21	11 6
Kent-street .....	Cutting down, forming, and repairing roadway, and building 162 feet retain- ing wall ..	10,530		49					372	6 9
King-street .....	Delivering metal, water- ing roadway, and minor repairs ..			21					73	8 6
Lane leading into Dow- ling-street .....	Repairs ..			10					1	4 6
Lime-street .....	Repairs ..			43		8			5	9 0
Liverpool-street .....	Repairs, rough guttering, cartage of stone for gut- ter, and backing gutter ..			612	65		87		150	6 3
Macquarie-street .....	Paving in front of Mint, and building drain and shaft ..			10					24	6 0
Margaret-place .....	Repairs and rough guttering ..			66			291		51	5 6
Market lane .....	Repairs ..				12				1	15 0
Market-street .....	Repairs ..				40				9	0 0
McLeay-street .....	Opening channels ..			17				720	5	18 0
Metal .....	Breaking 276 tons blue metal, and stacking do. }								89	3 6
Middle-street .....	Repairs ..			13					1	1 0
Miller's-road .....	Rough guttering ..			60			252		29	15 0
Newtown-road .....	Repairs ..			14	71	95			25	19 6
Nichols-street .....	Opening channels ..							3,600	7	5 0
O'Connell-street .....	Backing kerb, and repairing crossing ..		242	288					45	11 0
Palmer-street .....	Repairs, and opening channel ..			45				1,500	18	12 3
Park-street .....	Repairs, and opening channel ..			218				978	26	12 9
Parramatta-street .....	Repairing and metalling ..					305			177	4 6
Pennant Hills Quarry .....	Taking delivery of metal ..								14	8 0
Phillip-street .....	Repairs, and backing kerb ..			946					80	11 4 3
Pitt-street .....	Cutting down, forming, and repairing roadway ..			575		86			286	19 6
Prince's-street .....	Forming roadway, backing kerb, and rough guttering ..			536			40		54	8 3
Riley-lane .....	Rough guttering ..						261		9	19 6
Riley-street .....	Forming and repairing, and rough guttering ..			53			120		23	10 6
Road at Lyons' Terrace .....	Repairs ..								1	16 9
Road at St. James's .....	Forming roadway ..								26	2 0
Road at St. Mary's .....	Opening channels ..							1,800	3	12 0
South Head Road .....	Cutting down and repairing road and backing kerb ..	6,200		1,289					105	14 9
Spring-street .....	Repairs ..			10					1	11 0
Stanley-street .....	Opening channels and rough crossing ..			18			51	240	9	9 0
Sussex-street .....	Forming, repairing, and metalling roadway and backing kerb ..		80	4,974	434	949			554	14 6
Union-lane .....	Rough guttering ..						438		16	19 0
Upper Fort-street .....	Repairs ..				12				1	1 0
Upper William-street .....	Repairs and opening channels ..			332				2,346	25	4 6
Victoria-lane .....	Opening channels ..							285	0	19 6
Victoria-street .....	Repairs and opening channels ..			217				1,428	24	8 9
Wallis-lane .....	Rough guttering ..						432		15	4 9
Watering Streets .....	Making wells, repairing pumps, and watering George-street, 8,328 tons water ..								507	18 0
William-street .....	Forming, gravelling, and repairing roadway and backing kerb ..			1,986	597				289	9 0
Wilmott-street .....	Repairs and rough guttering ..			79			555		51	6 3
Wilton-street .....	Repairs ..			228					13	6 0
Woolloomooloo-street .....	Repairs and opening channel ..								72	9 3
Wynyard-lane .....	Cutting down, ballasting and metalling roadway, and carting stone for gutter ..	9,800		331	322	159		3,444	72	14 9
York-street .....	Repairs and opening channels ..			213				1,599	25	5 0
Yurong-street .....	Opening channels ..							2,328	19	12 3
	Total amount .....	36,065	13,495	20,926	2,537	3,077	7,258	35,196	9,541	15 3

GENERAL



APPENDIX TO SECOND YEARLY REPORT OF THE CITY COMMISSIONERS. 19

1855.

GENERAL CITY IMPROVEMENTS—(Carried out by Contracts during the year 1855.)

KERBING AND GUTTERING.

NAME AND LOCALITY.	Kerbing, Lineal feet.	Guttering, Superficial feet	Rough Gut- tering, Lineal feet.	Gutter Crossings, Superficial feet.	Drains in lieu of Gutter Crossings, Lineal feet.	£ s. d.
Alfred-street			264		27	20 6 0
Bathurst-street	138	418				73 9 0
Bent-street		97			110	66 16 0
Botany-street	100	300				41 6 6
Bourke-street				181		8 0 0
Bridge-street	333	999				119 0 8
Burton-street					227	135 0 0
Castlereagh-street		280				23 13 0
Clarence-street, (rock)	45	135				26 8 9
College-street	87	261				53 4 6
Crescent-street			227			17 4 0
Cumberland-street	961	3,339				561 15 2
Druitt-street	245	612				26 0 0
Elizabeth-street		141				20 7 4
Essex-lane	221	525				92 9 0
Forbes-street	184	570				91 0 0
George-street	120	573				140 8 6
George-street Market						
Goulburn-street	101	315				50 10 8
Hunter-street		453				35 15 0
King-street	312				38	70 2 6
Liverpool-street			2,448	552		150 0 0
Lyons' Terrace	393	1,375				94 1 0
Macquarie-street	90	270				42 15 0
O'Connell-street	1,186	4,038				796 15 10
Palmer-street			644			44 17 0
Park-street		1,066		548		180 8 6
Phillip-street	1,317	6,138				1,559 16 6
Pitt-street	506	1,285				124 16 9
Princes-street	874	2,979				1,074 14 4
South Head Road	1,576	4,728				1,419 0 3
Sussex-street, (paid on account)	4,370	13,110				1,717 14 0
William-street	2,360	8,160				1,383 6 4
Wynyard-lane		3,172				193 18 0
Wynyard-square	54	162				35 3 0
Wynyard-street	191	579				110 7 0
Total Amount	15,764	56,080	3,583	1,281	402	10,600 10 1

STREET WORKS.

NAME AND LOCALITY.	Excavation, Cubic Feet.	Ballast &c., Tons.	Gravel &c., Tons.	Blue Metal, Tons.	Water Channel, Lineal Feet.	Drains, Lineal Feet.	Paved crossings Superficial Feet	Stone Steps, Number.	Fencing, Rods.	£ s. d.
Albion-street					1,683					38 5 0
Alfred-street		423								79 14 0
Argyle-street (steps)								56		52 11 0
Bay-street		253	376							28 0 0
Bent-street						42				10 10 0
Botany-street		373	420							62 0 0
Campbell-street					1,062					23 6 7
Charles street		138								11 5 0
Clarence-street (rock)	138,240									1,243 0 0
Cleansing										1,866 1 0
Cleansing water closets										3,316 12 0
College-street			594		594					116 6 6
Crescent-street		369	370							24 15 4
Crown-street					6,963					158 5 0
Devonshire-street		2,000	1,600							363 0 0
Dowling-street		4,875								100 0 0
Erskine-street			262							52 10 0
Forbes-street		6,345								203 0 0
Gas Lane		131	73							11 7 3
George-street	4,176			1,469			2,088			957 0 0
George-street Market										2,000 0 0
Haymarket										61 11 0
Kent-street (rock)	1,08,756	164	184							3,381 2 2
King-street	51,480			1,269			2,160			1,120 0 0
Macquarie-street							480			20 8 0
Painting street names					610					43 18 9
Palmer-street		3,270								183 3 0
Pennant Hills (quarry)										4,070 10 5
Pitt-street								49		36 15 0
Princes-street			439							54 4 2
South Head Road		3,038	2,430							467 0 0
Sussex-street						76				60 16 0
Watering streets										177 19 11
Wharf, Soldiers' Point										3,465 0 0
William-street	197,270	1,830	2,345					18		1,256 0 0
Wynyard Lane										25 16 9
Total	499,922	23,209	9,093	2,738	10,912	118	4,728	74	49	25,141 13 10

## APPENDIX E.

## SPECIFICATION

Of Pavement to be laid under the provisions of 19th Victoria, No. 18, in all that portion of the City of Sydney known as Pitt and George streets, together with the respective streets connecting the same, from the western boundary of George-street to the eastern boundary of Pitt-street, both inclusive.

Pavement of the best quality of stone shall be laid in accordance with the descriptions and dimensions following :

The flags shall be of Yorkshire grey or blue stone, Caithness pavement, or granite ; and when these cannot be procured in the Colony, of Colonial sandstone, or of such other material as may be approved of by the City Commissioners, or the City Surveyor.

The area of every flag of the above description of imported stone shall be, not less than three and a half square feet, and the thickness of the same not less than two inches ; but flags of larger dimensions will be preferred. The area of every flag of Colonial or other sandstone, shall be not less than five square feet, and the thickness of the same not less than four inches. The whole flags shall be well dressed with rectangular sides, except in such cases as the pavement may be required to fit into the circular kerbing at the corners of streets and other such places.

The pavement shall be laid in the following manner :

The ground along the site intended for the pavement shall be excavated to a depth of 12 inches from the top of the kerb, with a uniform slope of 1 in 36 from the building line to the kerb line. A foundation, 7 inches deep, shall be formed in two layers of broken stone, each layer to consist of quarry ballast, ironstone, blue metal, or any other description of stone adapted to the purpose, and to be well rammed ; and the stones for this purpose shall be broken to a size which shall admit of their passing freely in every direction through a ring 3 inches in diameter.

A layer of sand, or well screened gravel, shall be spread over the stone foundation, and consolidated by ramming, with the surface formed at a gradient of 1 in 36, as above. When the foundation shall have been formed to the satisfaction of the City Surveyor, flagging of approved quality and description, as before mentioned, shall be laid in accordance with the following directions :

Every flag shall be set in mortar with close joints. The whole pavement, when laid, shall have a uniform fall of 1 in 36 from the building line, to the kerb line, and shall close up with, and abut against, the kerbing, according to the plan and section of the City Surveyor. All materials necessary to the execution of the work shall be approved of by the City Surveyor, and the whole work shall be executed to his satisfaction, and in accordance with this specification and the plan above mentioned.

Any neglect of the directions and requirements herein contained, shall entail the rejection of the work, as provided by the 4th section of 19th Victoria, No. 18.

(Signed) W. H. BARON,  
City Surveyor.

*City Surveyor's Office,  
Sydney, 29th January, 1856.*

Adopted by the Commissioners for the City of Sydney,  
this twenty-ninth day of January, A.D. 1856.

(Signed) C. H. WOOLCOTT,  
Secretary.

## APPENDIX F.

*City Commissioners' Office,  
Engineer's Department,  
Sydney, March 28th, 1856.*

GENTLEMEN,

I had the honor to receive from your Board on the 12th February last the appointment of City Engineer, and entered upon the duties of the office on the 13th of that month.

Your Board, in consequence of my predecessor having left you without furnishing a report of his proceedings of last year, has instructed me to prepare and present to you a Report upon the progress, and condition, of the works performed during last year, as far as lies in my power.

Had I known at the time of entering upon the duties of the office of City Engineer, that it would be necessary for me to furnish your Board with a Report upon the Sewerage Works so early, I should have considered it my duty to recommend your Board to institute an accurate measurement of all the work done to the new sewers, and at the same time a close and thorough inspection of the whole, that I might be in a position to report to you upon them most fully and confidently from my own actual observation ; but, under the circumstances, I did not consider this course expedient or necessary for my own immediate guidance, because—

1st. It appeared that a general measurement, instituted by your Board, was commenced on the 27th and completed on the 31st December last, by Messrs. Rider, Hooper, Mais, and Orford, on your part, and by Mr. Randle, with his own assistants, on his part.

2nd. Because another general quarterly measurement would take place on the 1st of April, when the manholes of the sewers would be opened throughout, and the best opportunity afforded for closely inspecting them.

I considered, therefore, that the object to be attained by a general measurement, could be met sufficiently for the time by a careful comparison of the measurements of the 31st December last, with those made since, and with the sections; and where any discrepancy appeared that I might check it by local measurements. This course I pursued, and although some discrepancies appeared, I found none of such magnitude as to call for a general measurement before the usual time.

From the report of my predecessor to your Board, dated 29th December, 1854, it will be seen that the first portion of the City to be drained, is that area bounded by George, Bathurst, and Macquarie streets, and terminating on the north-east side of Sydney Cove; and the point of discharge selected, is the extreme point northward of Fort Macquarie. I have carefully examined this area, as far as I have been able, and I am of opinion that the sewers in the course of construction in Pitt, Castlereagh, Elizabeth, Phillip, and Macquarie streets, leading into the main sewer as it crosses them in its course to Macquarie Fort, will form chief arteries for carrying out a most effective system of drainage, throughout the whole section in which they lie.

On taking office I found the sewerage works in these streets in a very considerable state of advancement, and it was only reasonable to expect that I should find in the office a general plan, shewing the works intended to be executed on the whole section, and working drawings of the same, shewing how they were carrying, and to be carried out, in detail; but this was not the case.

Your Engineer's office, and papers, were in such a state of derangement, that it was with the greatest difficulty and trouble I could obtain a correct knowledge of the proceedings, or learn the actual state of the works which were executed.

The longitudinal sections for the sewers in the streets above named, were prepared to a certain extent, but the junctions for connecting the sewers of the cross streets running into them were not shewn. The sections for some of the sewers in the cross streets were partially prepared, while for others they were not commenced. Thus the details of the work, had chiefly to be learned in the sewers themselves, and I have not spared time or trouble in doing so.

With these preliminary observations, I have the honor to report on the progress of the works, and will commence with the

#### MAIN SEWER,

which is 6 feet in height by 4 feet wide, and extends from the foot of Pitt-street to the point of discharge at Macquarie Fort. The gradient of the main sewer is sufficient, but necessarily limited, in comparison with the other sewers, in consequence of the level of the surface of the ground under which it passes at the junction of Pitt-street and Bridge-street being so little above high-water mark.

The tunnelling and open cutting for this sewer are through, with the exception of about 189 feet of tunnelling under the Domain, which is being driven from six faces, and will be finished in about six weeks. The brickwork is completed to that part where it crosses the foot of Castlereagh-street, and is progressing rapidly eastward towards the Domain. In fact, the works for completing the main sewer are being pressed forward with vigour, that the other sewers which are nearly completed, may be brought into use as early as possible.

The Pitt-street sewer, which is 4 feet 6 inches in height by 3 feet wide, is intended to drain the low level in the neighbourhood of Pitt-street, and is the next in size to the main or discharging sewer. It continues from its junction with the main up Pitt-street to its summit level at Bathurst-street, on an average gradient of about 1 in 67.

The whole of this sewer is nearly completed, and part has been in use for some time conducting the sewage from a sewer in Hunter-street to the Tank Stream. The parts incomplete are a small piece of arching about 10 feet long near Market-street, a small piece of the outer ring of arching at the crossing of Hunter-street, and the arching for 5 feet in length, near Spring-street, at all of which places there are sufficient and just reasons for their remaining unfinished, until the main sewer can be brought into action.

The only instance I am aware of, where the sewer has been made at too high a level to drain the basement, and receive the sewer of a house, is that of the Union Bank in Pitt-street. There may be similar instances on the south-west side of the sewer in Macquarie-place, but these, if there be any, were unavoidable, that of the Union Bank in Pitt-street was the reverse.

The Elizabeth-street sewer is 3 feet 6 inches in height by 2 feet 4 inches wide, and continues on a good gradient of 1 in 140 from its summit level at Bathurst-street to Bent-street, and thence to its junction with the main sewer at an average gradient of 1 in 15. The whole of the open cutting, and tunnelling, is done excepting about 56 feet, which will be completed in a few days, and the brickwork of the sewer is completed as far as 100 feet north of Market-street.

When I first visited the sewers after receiving the appointment of your Engineer, the ground at the south end of Elizabeth-street was open, and I availed myself of the opportunity to examine closely the nature of the ground. I found it to consist partly of ironstone, and partly of clay, intersected with thick veins of a very tenacious description of pipe clay. This ground can neither be termed rock nor soil, and in the contract there is no price scheduled for any other description of ground. The payment for the work of excavating this mixed ground was therefore open to an arrangement, and the settlement made was as if it were half rock and half soil, at the price named for them in the schedule, and I could not suggest a more equitable arrangement.

## 22 APPENDIX TO SECOND YEARLY REPORT OF CITY COMMISSIONERS.

The Phillip-street sewer is 3 feet 6 inches in height by 2 feet 4 inches wide, and is formed on a good average gradient of about 1 in 40 from its summit level at King-street to its junction with the main sewer near the New Water Police Office. The whole of the tunnelling and open cutting is done, excepting that for the junction of the main sewer, which is in progress, and the brickwork of the sewer is completed excepting the junction with the main sewer. A piece of brickwork 16 feet long, where the Infirmary drain intersects the line of new sewer in this street, and the junctions for Hunter and Bent streets have also to be done, when the main sewer is opened.

The Macquarie-street sewer is 3 feet 6 inches by 2 feet 4 inches, and is formed on a good average gradient of about 1 in 41 from its summit level at King-street to its junction with the main sewer near the ice-house, on the east side of Sydney Cove. The whole of the tunnelling and open cutting for this street is finished, excepting that for making the junction with the main sewer, which is now being done. The brickwork of this sewer is laid throughout, and as soon as the driving for the main sewer is finished, the junction with it will be made.

The Castlereagh-street sewer is 3 feet 6 inches in height by 2 feet 4 inches wide, and is being formed on a good average gradient of about 1 in 62, from its summit level at Bathurst-street to its junction with the main sewer at the north-east end of Macquarie-place. The tunnelling in this street is completed for about one-third of the whole length, and the brickwork, as far as completed, extends from the summit level at Bathurst-street down to Park-street.

The Bridge-street sewer, which is 3 feet 6 inches in height by 2 feet 4 inches wide, is only partly constructed. It commences about 75 feet eastward of George-street, and descends on a good gradient of about 1 in 50 to the Tank Stream. At this point it ceases, and commences again on the east side of the Tank Stream, where it forms its junction with the main, at the same spot as the Pitt-street sewer. The intervening space is not constructed, but will be as soon as arrangements for covering the Tank Stream are concluded. The short length of sewer on the west side of the Tank Stream is the only place, that I have observed, where the nature of the materials used is not so hard as in the other sewers, but when the rendering of this sewer is completed, the work will be substantial and durable.

The sewers in many places have not yet been rendered, and in many places where rendering has been put on, it is imperfect and of insufficient thickness. In some cases there are valid, but temporary, reasons for this, but the whole will necessarily be made in perfect order by the contractor before the work is finally passed, or paid for, as complete.

The inverts, as well as the crowns, of these sewers are all laid in cement. It is usual elsewhere, excepting in very wet and soft soil in open cutting, to lay both invert and crown in mortar, and the crowns only in cement where done in tunnelling.

In Macquarie-place and other localities where the depth of the soil above the crown of the sewer is not great, the brickwork of the sewer is made in three rings, in cement all round, and in the solid rock, two rings, which are quite sufficient.

Annexed is a list of old sewers which have been repaired during the past year, shewing the quantity of lineal yards of sewer repaired to 31st December, 1855, as returned by one of the Assistant Engineers in your office, and forms Appendix A to this Report.

At the earliest possible moment after the general measurement for this quarter, I shall have the honor to present to you a statement of the quantities of work done to the new sewers, and the cost of it to 31st March, 1856, which will be Appendix B to this Report.

With regard to the survey of the City, Mr. Baron, the City Surveyor, under whose superintendence it is, has furnished his Report, hereto appended.

It has afforded me much pleasure to have been allowed to defer the delivery of this Report to you, for a few days, as I have in the interim inspected those sewers which had not been opened for some time previously, and now I feel myself in a position to give, from actual observation, a decided opinion of the whole, and I have no hesitation in stating that the materials with which these sewers are constructed, generally are sufficient, and appropriate; the brickwork is good and substantial, and the sewers on the whole are exceedingly strong.

I have, &c.,  
(Signed) EDWARD BELL, C. E., M. Inst. C. E.,  
City Engineer.

To the Commissioners for the  
City of Sydney.

19 April, 1856.

Gentlemen,

I have now the honor to hand you the Appendix B to my Report of 28th March, 1856, which contains a statement of the quantities of work done, and the cost of them. I have to observe that, in accordance with your desire, I examined the accounts, with a view to ascertain whether, at any time, Mr. Randle has been overpaid, or paid in excess of the work performed by him, and I beg to inform you that I can find no trace of this whatsoever; but, on the contrary, I find that the payments to Mr. Randle have on all occasions been much in arrear of the sums due to him.

I have, &c.,  
(Signed) EDWARD BELL, C. E., M. Inst. C. E.,  
City Engineer.

To the Commissioners for the  
City of Sydney.

## APPENDIX TO SECOND YEARLY REPORT OF CITY COMMISSIONERS. 23

## APPENDIX F. (A.)

STATEMENT shewing various Works connected with City Sewerage, with Amounts expended thereon, from 1st January to 31st December, 1855.

DATE.	BY WHOM.	NATURE OF WORK.	AMOUNT.
1855.			£ s. d.
Jan. 4	Thos. Donohoe.	Construction of Drain, Durand's Alley .....	29 10 0
19	"	Construction of Drain from Durand's Alley to Campbell-street .....	4 5 0
19	"	Well at Woolpack Inn yard .....	4 14 6
19	B. Dyer.	Repair of Drain at Messrs. Ferris and Arkins' .....	14 8 9
Feb. 7	Thos. Donohoe.	Construction of stone Drain, Sussex-street .....	6 6 0
9	"	Repair to Gutter, Little George-street .....	17 8 0
16	"	Construction of Drain at Horse Police Barrack-yard .....	6 12 0
April 20	"	Construction of Barrel-drain, Pitt-street, adjoining Hunter-st. ....	5 0 0
26	"	Repairs to Drain, George-street, between Hunter & Bridge-sts. ....	20 12 6
26	"	Repairs to Drain in Market-street, near Castlereagh-street ..	1 10 0
26	"	Construction of Drain in Pitt-street, near Castlereagh-street..	7 10 0
27	T. & J. Mathew.	Construction of new Sewer across New Pitt-street .....	60 14 0
May 16	Thos. Donohoe.	Construction of Barrel-drain in Boomerang Road .....	124 5 2
23	"	Repairs to Drain, King-street (Mr. Little's) .....	8 15 0
23	"	Rebuilding kitchen, Castlereagh-street (Mr. Phibbs') .....	10 0 0
23	"	Construction of Barrel-drain, Hunter-street .....	31 10 0
June 5	"	Repairs to Drain, White Horse yard .....	24 18 0
5	"	Repairs to Drain, opposite Currency Lass, Hunter-street ....	10 1 0
21	"	Repairs to Drain, Castlereagh-street, near Liverpool-street ..	13 8 2
21	"	Repairs to Drain, Liverpool-street .....	65 8 0
28	"	Repair of Main Sewer, Sussex-street, near Druitt-street ....	43 17 0
Oct. 18	"	Repair of Drain, Joint Stock Bank, Pitt-street .....	10 6 0
25	"	Repair to Drain, Pitt and King-streets .....	12 0 4
25	"	Repair to Drain, Hunter-street .....	14 0 0
		Construction of Drain, Wynyard-lane .....	592 4 9
25	Murphy.	Circular Kerbing and Guttering .....	2 5 4
		Total.....£	1,141 9 6
		Sewerage Works executed by the City Commissioners for private parties, the cost of which has not yet been refunded.	
		Drain in Bridge-street, for the Bank of New South Wales ..	25 18 0
		Sewerage Works executed by the City Commissioners for private parties, but the cost of which has been refunded.	
	Thos. Donohoe.	Joint Stock Bank, George-street .....	88 2 6
	"	Drain, George-street South (Yeamans, &c.) ..	70 0 0
	"	Drain in Goulburn-street (McQuade) .....	11 5 6
		Total.....£	169 8 0

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## APPENDIX F. (B)

## QUARTERLY Measurement of Sewerage Works to 31st March, 1856.

MARCH 31st., 1856.	Depth.	Price.	PRICE.	TOTAL.
	ft. in.	£ s. d.	£ s. d.	£ s. d.
<b>MAIN SEWER.</b>				
<i>Quantity.</i>				
63.13.5 c. yds. excavation in rock, Fort Macquarie	6 0	0 8 0	25 8 0	
398.6.8 " " " Quarry	15 0	0 9 0	179 10 11	
23.9.0 " " " manhole, Macquarie-st.	25 0	0 10 0	11 13 4	
217.7.8 " " " Star Hotel	..	0 9 0	97 15 6	
123.7.10 " " " "	..	0 8 9	53 18 9	
73.1.8 " " " soil, Star Hotel	..	0 4 0	14 12 3	
63.7.0 " " " junction	..	0 4 9	15 0 6	
16.17.10 " " " concrete under sewer	..	0 4 9	3 19 1	
57.0.0 " " " raising gas and water mains	..	0 4 0	11 8 0	
25.26 2 ft lineal tunnelling from Fort to Macquarie Place, in rock	..	5 0 0	12,630 16 8	
38.118.0 rods brickwork, in cement	..	42 0 0	1,614 4 5	
16.17.10 c. yds. concrete for main sewer & junction..	..	0 15 0	12 9 11	
17.13.6 " of asphalt on crown of junction	..	1 15 0	30 12 6	
1446.0 " of lead, ½ mile	..	0 3 0	216 18 0	
150½ " " 1¼ mile	..	0 6 0	45 1 6	
28 " " 1½ mile	..	0 6 9	9 9 0	
2 manholes, each	..	4 3 0	8 6 0	
Fixing 1 plate	..	2 0 0	2 0 0	
15.13.0 c. yds. excavation in soil, Fort Macquarie..	6 0	0 4 0	3 2 0	
8.0.0 " " " Macquarie-st. man- hole	6 0	0 4 0	1 12 0	
20.11.8 c. yds. excavation in soil, Castlereagh-st. junction	6 0	0 4 0	4 1 7	
9.22.2 c. yds. excavation in rock, Castlereagh-st. junction	..	0 8 9	4 5 11	
8 cast iron junction pipes	..	2 5 6	18 4 0	
8 holes excavated for ditto in rock	..	0 8 0	3 4 0	
19.26.0 c. yds. excavation in rock, Elizabeth-st. man- hole	12 0	0 8 9	8 14 8	
1575.7½ ft. super rendering	..	0 0 9	59 1 8	15,085 10 2
Less £100 to be deducted for dressing near Water Police Office	..	.....	.....	100 0 0
				14,985 10 2
<b>MACQUARIE ST. SEWER (3 FT. 6 IN. BY 2 FT. 4 IN.)</b>				
30.15 c. yds. excavation in soil for outlet	6 0	0 4 0	6 2 2	
87.21 " " " rock	12 0	0 8 9	38 8 1	
42.7.6 " " " "	10 0	0 8 6	17 19 4	
87.21 " " " soil	6 0	0 4 0	17 11 1	
42.7.6 " " " "	6 0	0 4 0	8 9 2	
2743.0 ft. lineal tunnelling in rock	..	4 0 0	10,972 0 0	
80.0 " 12in. pipes for outlet	..	0 0 4	1 6 8	
91.223.8 rods brickwork, in cement	..	42 0 0	3,856 10 8	
2 manholes	11 6	5 14 6	11 9 0	
2 ditto plates fixed	..	2 0 0	4 0 0	
13 ft. lineal of curbing to manhole No. 2	..	0 1 0	0 13 0	
1542.0 c. yds. lead, ¼ mile	..	0 3 0	231 6 0	
257.18 " " ½ mile	..	0 4 6	57 19 6	
8.12 " excavation in rock for manhole	10 0	0 9 0	3 16 0	
16.24 " " " soil	8 0	0 4 3	3 12 3	
57 12in. collars.	..	0 4 0	11 8 0	15,242 10 11
<b>BRIDGE ST. SEWER (3 FT. 6 IN. BY 2 FT. 4 IN.)</b>				
389.25.3 c. yds. excavation in soil	10 0	0 4 6	87 14 8	
68.0.8 " " " rock	10 0	0 8 6	28 18 3	
42.0 ft. lineal tunnelling	..	4 0 0	168 0 0	
9.50.6 rods brickwork, in cement	..	42 0 0	385 15 11	
5 clay junctions	..	0 13 0	3 5 0	
195.25 c. yds. lead, ¼ mile	..	0 3 0	29 7 9	
5 holes excavated for junction in soil	..	0 4 0	1 0 0	704 1 7
<b>CASTLEREACH ST. SEWER (3 FT. 6 IN. BY 2 FT. 4 IN.)</b>				
1237.5 ft. lineal tunnelling in rock	..	4 0 0	4,939 13 4	
141.8 " " " soil	..	1 18 0	269 3 4	
10.203.8 rods brickwork, in cement	..	42 0 0	451 8 11	
13 cast iron junction pipes	..	2 5 6	29 11 6	
1 manhole	8 3	4 5 3	4 5 3	
1 " plate fixed	..	2 0 0	2 0 0	
5.4 c. yds. excavation in rock for manhole	10 0	0 8 6	2 3 9	
2.14 " " " soil	6 0	0 4 0	0 10 1	
241.10 " lead, 1 mile	..	0 5 6	66 7 6	
35.12.9 " excavation in rock for junction	15 0	0 9 0	15 19 3	
15.2.7 " " " soil	6 0	0 4 0	3 1 10	
13 holes excavated for junction pipes, 2-3rds rock and 1-3rd soil	..	0 6 8	4 6 8	5,798 11 5
Carried forward	..	.....	.....	£ 36,730 14 1

MARCH

## APPENDIX TO SECOND YEARLY REPORT OF CITY COMMISSIONERS. 25

MARCH 31st, 1856.		Depth.	Price.	PRICE.	TOTAL.
		ft. in.	£ s. d.	£ s. d.	£ s. d.
Brought forward .....					36,730 14 1
PHILLIP ST. SEWER (3 FT. 6 IN. BY 2 FT. 4 IN.)					
2292.7	ft. lineal tunnelling in rock .....		4 0 0	9,170 6 8	
229.5	c. yds. excavation in " .....	15 0	0 9 0	103 2 8	
229.5	" " " soil .....	8 0	0 4 3	48 14 0	
63.263.0	rods brickwork, in cement .....		42 0 0	2,686 12 2	
61	cast iron junctions .....		2 5 6	138 15 6	
1336½	c. yds. lead, ¼ mile .....		0 3 0	200 8 9	
28½	" " " ¼ " .....		0 6 0	8 12 6	
1	manhole .....	6 6	3 9 6	3 9 6	
1	" " .....	8 0	4 3 0	4 3 0	
1	" " .....	11 0	5 10 0	5 10 0	
1	" " .....	6 6	3 9 6	3 9 6	
4	plates fixed .....		2 0 0	8 0 0	
15.16.10	c. yds. excavation in rock for manhole .....	10 0	0 8 6	6 12 9	
15.16.10	" " " soil .....	6 0	0 4 0	3 2 6	
21.12.0	" " " rock, Bridge-st. junctions .....	12 0	0 8 9	9 7 6	
21.12.0	" " " soil, " " .....	6 0	0 4 0	4 5 9	
61	holes for junction pipes, rock .....		0 8 0	24 8 0	
					12,429 0 9
PITT ST. SEWER (4 FT. 6 IN. BY 3 FT.)					
953.22	c. yds. excavation in rock from Bridge-st. to Hunter-st. ....	12 0	0 8 9	417 5 10	
953.22	c. yds. excavation in soil from Bridge-st. to Hunter-st. ....	6 0	0 4 0	190 15 3	
558.22	c. yds. excavation in soil for outlet to Tank Stream and diversion Spring-st. ....	12 0	0 4 9	132 14 8	
75.1	c. yds. excavation in rock, Hunter-st. junct. ....	12 0	0 8 9	32 16 7	
75.1	" " " soil, " " .....	6 0	0 4 0	15 0 2	
48.2	" " " rock for " branches Hunter-st. ....	12 0	0 8 9	21 0 7	
48.2	c. yds. excavation in soil for branches Hunter-st. ....	6 0	0 4 0	9 12 3	
399.4	c. yds. excav. in rock } junction of King, Market, & Park-sts. ....	15 0	0 9 0	179 12 4	
399.4	" " " soil } .....	8 0	0 4 3	84 16 4	
30.7	" " " } 5 manholes, av. depth 12 ft., .....	8 0	0 4 3	6 8 7	
15.3	" " " } 1-3rd rock and 2-3rds soil.. ..	12 0	0 8 9	6 12 2	
2771.2	ft. lineal tunnelling in rock .....		4 10 0	12,470 5 0	
325.0	" " " " soil .....		2 0 0	650 0 0	
78.4	" " " " rock for King, Market, and Park-st. branches .....		3 10 0	274 3 4	
13.4	ft. lineal tunnelling in soil for King, Market, and Park-st. branches .....		1 16 0	24 0 0	
200.225.5	rods brickwork, in cement .....		42 0 0	8,434 16 1	
234	ft. lineal of 12in. pipes laid for outlet to Tank Stream .....		0 0 4	3 18 0	
12	ft. lineal of 9in. in cement, Spring-st. ....		0 0 6	0 6 0	
6	manholes, average depth .....	11 0	5 10 0	33 0 0	
8	iron plates fixed .....		2 0 0	16 0 0	
11	clay junction pipes fixed .....		0 13 0	7 3 0	
88	iron junction pipes, 12in. ....		2 5 6	200 4 0	
7.21	c. yds. of asphalt .....		1 15 0	13 12 2	
3914½	" " " lead, ½ mile .....		0 4 6	880 15 3	
99	holes excavated in rock for junction .....		0 8 0	39 12 0	
					24,144 9 7
ELIZABETH ST. SEWER (3 FT. 6 IN. BY 2 FT. 4 IN.)					
3170.11	ft. lineal tunnelling in rock .....		4 0 0	12,683 13 4	
387.4	" " " " soil .....		1 18 0	735 18 8	
613.3.4	c. yds. excavation in rock .....	10 0	0 8 6	260 11 6	
613.3.5	" " " " soil .....	6 0	0 4 0	122 12 6	
9.7	" " " " manhole, No. 1 .....	10 0	0 4 6	2 1 8	
41.83.4	rods brickwork in cement .....		42 0 0	1,734 17 4	
1	manhole .....	14 0	6 17 0	6 17 0	
1	" " " " rock .....	9 0	4 12 0	4 12 0	
1	" " " " " .....	6 6	3 9 6	3 9 6	
12	iron pipes for junctions .....		2 5 6	27 6 0	
3	manhole plates fixed .....		2 0 0	6 0 0	
158.0	c. yds. lead, ½ mile .....		0 3 0	23 14 0	
1467.0	" " " " ½ " .....		0 4 6	330 1 6	
1084	" " " " 1 " .....		0 5 6	29 15 4	
9	clay collars for junctions, 12in. ....		0 4 0	1 16 0	
12	holes for junctions in rock .....		0 8 0	4 16 0	
					15,978 2 4
Amount advanced on Account of rendering in Pitt, Castlereagh, Elizabeth, Phillip, Macquarie, and Bridge-st. Sewers .....			.....	.....	1,504 11 2
					90,786 17 11

(Signed) EDWARD BELL,  
City Engineer.

Total Amount of Sewerage Works performed by Mr. Randle to 31st March, 1856 .....	£90,786 17 11
Payments made to Mr. Randle to the same date .....	87,699 17 5
Balance due to Mr. Randle .....	3,087 0 6
Lodged by Mr. Randle with the Commissioners as security .....	1,000 0 0
Total in hands of Commissioners, 31st March, 1856 .....	£4,087 0 6

## APPENDIX F. (C.)

MEMORANDUM of rate of progress and position of Trigonometrical Survey on the 31st December, 1855.

Section 1.—The whole of the construction lines measured, and points driven, and plotted. No detail sent in by the contractor, Mr. Brownrigg.

Section 2.—The construction lines measured, and points driven, the whole of the detail sent in by the contractor, and that part bounded by the Harbour on the north, by George-street on the west, by King-street on the south, and by Macquarie-street on the east, plotted for the large maps, on a scale of 40 feet to the inch.

Section 3.—The construction lines measured and laid down, the points driven, and the portion bounded by College-street on the east, by Clarence-street on the west, by King-street on the north, and by Campbell and Druiitt-street on the south, surveyed in detail and sent in.

Section 4.—The whole of the construction lines, and points laid down, and measured, and the detail work of that part bounded by Liverpool-street on the north, by South Head Road on the north-west, and by Bourke-street on the east, sent in by contractor.

Section 5.—Being carried out by day labor. The whole of the construction lines and points of that part bounded by Dowling-street on the east, by South Head Road on the north, by Elizabeth-street on the west, and in parts by Cleveland-street on the south, plotted.

The interior detail will be commenced in about one month.

Section 6.—Not commenced.

From the above it will be seen that, with exception of the districts of Pyrmont, and Chippendale, the whole of the City has been measured and constructed, as regards the street lines, and boundary marks laid down for levels. These latter have not, unfortunately, been taken up and plotted. The cause of this rests with the late Engineer, who preferred a course of levels independent of the survey. The detail work of the most difficult part of the City is measured up and plotted for reference; and had the contractor for section 1 but employed ordinary exertion, his contract ere this would have been completed, and with it the whole of the north portion of the City.

I need scarcely add, that the trigonometrical portion has long been completed.

(Signed) W. H. BARON,  
City Surveyor.

18 March, 1856.

## APPENDIX G.

*City Commissioners' Office,  
Engineer's Department,  
Sydney, 28 March, 1856.*

## WATER WORKS.

GENTLEMEN,

It appears that the progress made in connexion with the works, required for the permanent water supply to the City of Sydney, since the date of the last Report (Feb. 22nd, 1855) from the late City Engineer to your Board, up to the 31st December last, consisted—

First, in erecting a 3-rail fence, 8 feet in height, a length of 90 rods, being closely paled, enclosing the land selected at Botany as the site of the intended reservoirs, and pumping machinery; for which purpose tenders were solicited for supplying the materials and for the erection of the work. The contract was let to Messrs. Morris, White, and Cox, and was reported as completed on the 28th December, 1855.

It appears that sections and borings were taken over a portion of the site of the works. Drawings were prepared of a part of the arrangements, comprising a supply reservoir, two filters, pure water basin, and the proposed embankment for separating the supply reservoir from Botany Bay, and other works incidental thereto, to accompany a specification which was prepared, for letting the works upon the basis of a schedule of prices.

Tenders having been called for on the 7th May, 1855, for three double-acting condensing engines, of seventy-five horse power each, that of Mr. William Randle was accepted; Mr. Randle undertaking to supply them in Sydney, within fourteen months from the date of order, for fifteen thousand pounds sterling, collectively; and afterwards to erect them at Botany, for three thousand pounds sterling.

On receiving this contract for perusal, I observed that the duty the engines were required to perform was not stated, and the diameter of pump was not given in the specification or plans; and immediately wrote, by permission of your Board, to Mr. S. C. Homersham, C. E., M. I. C. E., to inspect them before shipment; and authorized him, in the event of his finding the engines incapable of raising each 1,500,000 gallons per day a height of 210 feet, to grant a sufficient extension of time to make them so, under his direction. By this means I hope to have secured to you such engines as you require.

The delivery of the cast iron pipes contracted for by Messrs. Gilchrist, Watt, & Co, is reported as having been completed.

The contract entered into with Messrs. P. N. Russell & Co. on the 18th December, 1854, for the 30-inch water main, has been progressing favourably. About 70 lengths which arrived last year, were carted to the Botany Road; 260 lengths have arrived lately, and are now being carted to the Botany Road.

Detailed drawings of the stand pipe proposed to be erected at Botany, for the purpose of obtaining a column of pressure to deliver water, to the highest points in the City of Sydney



## APPENDIX TO SECOND YEARLY REPORT OF CITY COMMISSIONERS. 27

Sydney, were prepared; but I have laid them aside, as wrong in principle and expensive in practice; and am having other plans prepared, which will be less costly to make, and render the working expenses of the engines materially cheaper.

I found, on taking office, that no sections had been made of the ground between Sydney and Botany. I gave immediate instructions for levels to be taken and sections made; this being done with a view of ascertaining and adopting the best line upon which the main pipes should be laid. Hitherto they have been deposited along the Botany Road, where it was intended to lay them, along its bends and windings.

It will be necessary to make considerable modifications in the plans proposed for the Water Works at Botany, in order to render them less costly and equally efficient for the purposes required.

As soon as the necessary plans can be prepared, I shall have the honor to submit them for your approval.

I have, &c.,

(Signed) EDWARD BELL, C.E., M.I.C.E.,  
City Engineer.

I have appended a Return of the mains laid down in the city during the past year.

(Signed) E. B.

To the Commissioners for  
the City of Sydney.

## APPENDIX G. (A.)

RETURNS of all New Mains laid down in the Year 1855, with their sizes and localities.

<i>9-inch Pipes.</i>	
George-street South and Parramatta-street ... ..	123 pipes.
Hyde Park, from the Tunnel to Park-street ... ..	66
<i>6-inch Pipes.</i>	
Kent-street North, north end... ..	70
<i>5-inch Pipes.</i>	
Cumberland-street, north end... ..	52
Kent-street North, (north of Gas Lane)... ..	74
<i>4½-inch Pipes.</i>	
Kent-street North, (north end) ... ..	5
<i>3-inch Pipes.</i>	
Fort-street, Cumberland to Kent-street ... ..	197
George-street, at Mr. Wilshire's ... ..	35
Kent-street, (King and Market-streets) ... ..	134
Kent-street, part of King and Erskine-streets ... ..	20
Royal Mint ... ..	32
Domain Terrace ... ..	46
George-street South and Parramatta-streets, to form connection between new 9 and old 3-inch mains... ..	4
Wynyard Lane ... ..	60
Gloucester-street to north end ... ..	112
Dickson-street, from Liverpool-street eastward ... ..	35
Union Lane, George to Pitt-street ... ..	69
Sussex-street, south end of connection ... ..	9
South end of Phillip-street, repairs ... ..	10
Macquarie-street, extension of Main to Tunnel ... ..	25
Extension of Dock-yard Fountain across Wharf ... ..	10

N.B.—1,360 feet (152 pipes) 6 inches were laid down at Lachlan Swamp, to convey water from the Reservoir to the Tunnel, in the beginning of 1855.

Besides the pipes which were laid down in the different localities above stated, the following portions of mains have been lowered:—

The 3-inch main in Princes-street, beyond the Argyle-street cut, on account of a mistake in laying down the original main.

The 9-inch main which leads along old Macquarie-street, from the Tunnel to King-street, & at Park-street, on account of the street having been lowered by the City Surveyor.

The 3-inch Macquarie-street main, which supplies Macquarie-street north, at the same place and for the same reason.

The 9-inch Park and Pitt-street main, which formerly ran along old Macquarie-street to Park-street, and then turned at right angles down Park-street, was diverted from that course, and taken at an angle through Hyde Park to Park-street, near Elizabeth-street, to prevent the necessity of lowering it at Park-street as above.

The 6-inch main at the north end of Clarence-street was also lowered, on account of that street having been lowered by the City Surveyor.

Part of the 3-inch main in Kent-street, between King and Erskine-street, was also lowered for the same reason.

(Signed) GEORGE WILSON,  
Inspector, Water Works.

9 April, 1856.



1856.

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NEW SOUTH WALES.

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## CITY SEWERAGE WORKS.

(LETTERS FROM CITY ENGINEER.)

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*Ordered by the Legislative Assembly to be Printed, 6 August, 1856.*

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STATEMENT of Amounts paid to Mr. Randle on account of *Rendering*,  
with Memoranda of Work executed, &c. :—

- “(1.) City Engineer’s letter of 15 July, 1856, enclosing  
“ Statement of Accounts paid to Mr. Randle on account of  
“ *Rendering*.
  - “(2.) Letter of 18 July, enclosing Abstract of Work executed  
“ in Sewers, from 8 November, 1855, to 31 March, 1856, and  
“ Form of Certificate.”
-

## CITY SEWERAGE WORKS.

No. 1.

THE CITY ENGINEER to THE CITY COMMISSIONERS.

*City Commission,  
Engineer's Department,  
Sydney, 15 July, 1856.*

(Copy.)

GENTLEMEN,

Annexed I have the honor to hand you a Statement of the amounts paid, on account of Rendering, to Mr. Randle, the total of which is stated in my measurement to the 31st March last, as "Amount advanced, on account of Rendering in Pitt, Castlereagh, Elizabeth, Phillip, Macquarie, and Bridge-street Sewers, £1,504 11s. 2d."

This work is not complete.

I have, &c.,  
(Signed) E. BELL,  
City Engineer.

THE COMMISSIONERS  
FOR THE CITY OF SYDNEY.

[Enclosure in No. 1.]

### RENDERING.

		SUP. FT.	£	s.	d.
Dec. 31	{	Pitt-street ... ..	20,249-9	759	7 3
		Elizabeth-street ... ..	4,275-7	160	6 8
		Phillip-street ... ..	4,155-9	115	17 4
		Macquarie-street ... ..	3,795-0	142	6 3
		477-3...	17	17 11	
Jan. 24 ...		Phillip-street ... ..	1,897-6	71	3 1
Feb. 6 ...		Do. ... ..	1,207-0	45	5 7
Feb. 20	{	Phillip-street ... ..	2,631-0	98	13 3
		Castlereagh-street ... ..	1,105-6	41	9 1
March 3 ...		Castlereagh-street ... ..	1,393-0	52	4 9
			£1,504 11 2		

No. 2.

THE CITY ENGINEER to THE CITY COMMISSIONERS.

*City Commission,  
Engineer's Department,  
Sydney, 18 July, 1856.*

(Copy.)

GENTLEMEN,

Herewith I have the honor to lay before you, a copy of the Memorandums of work executed by Mr. Randle, and Abstracts of Accounts, commencing from November the 8th, 1855, to March 31st, 1856.

Also a Form of Certificate upon which payments are made to Mr. Randle, on account of works being executed by him for the City Sewerage Works. It is not in my power to send copies of the Certificates given from November 8th to March 31st, as they are all sent in to the Government.

I have, &c.,  
(Signed) EDWARD BELL,  
City Engineer.

THE COMMISSIONERS FOR  
THE CITY OF SYDNEY.

*Enclosure*

## CITY SEWERAGE WORKS.

3

[Enclosure in No. 2.]

A 13, No. 1.

No. of Abstract No. } Voucher No.  
to Warrant No. of 185. }

THE DEPARTMENT of the

Dr. to WILLIAM RANDLE.

DATE.	For the undermentioned Services, performed for the Department, viz. :—	AMOUNT.		
		£	s.	d.
185	(Copy.)			
	Amount, Advance to Account of Contract No. 1 of City Sewerage .....			
	<i>Examined.</i>			
	TOTAL .....	£		

I Certify, that the Services charged in the above Account were satisfactorily performed, according to agreement, by the above-named individual. I further Certify, that they were necessarily required for the Public Service, and that the Rates charged were the most reasonable for which the same could be procured, at the time they were stipulated for.

RECEIVED on the \_\_\_\_\_ day of \_\_\_\_\_ 185, from \_\_\_\_\_  
the Sum of \_\_\_\_\_ Pounds \_\_\_\_\_ Shillings  
and \_\_\_\_\_ Pence, Sterling, in full payment of the above Account, pursuant to  
Warrant of Government, No. \_\_\_\_\_, dated the \_\_\_\_\_ day of \_\_\_\_\_ 185.

Witness

CITY COMMISSION,  
Engineer's Department,  
November 8, 1855.

## SYDNEY SEWERAGE WORKS.

## SECTION No. 1.

## MEMORANDUM of Work executed by MR. WM. RANDLE.

To 8 November, 1855.

No. 11.

*Main Sewer.*—19 cubic yards open cutting in rock, 8s.; 68 do. do., 8s.; 343 do. do., 8s. 9d.; 128 do. do., 8s. 9d. 2,224 lineal feet driving in rock, £5. 57 cubic yards open cutting in soil, 4s.; 248 do. do., 4s. 8d. 8-77 14-inch brickwork, £42. 119 feet sup. rendering, 9d. 18 cubic yards concrete, 15s. 50 cubic yards asphalte, 30s. 500 cubic yards lead,  $\frac{1}{4}$ m., 3s.

*Bridge-street.*—As per Certificate No. 4.

*Pitt-street.*—40 cubic yards open cutting in rock, 8s. 9d.; 829 do. do., 8s. 6d.; 50 do. do., 8s. 9d.; 109 do. do., 9s. 6d.; 69 do. do., 8s. 9d.; 75 do. do., 9s. 3,097 lineal feet driving in rock, £4 10s.; 32 do. do., £4; 16 do. do., £3 10s.; 16 do. do., £3 10s. 40 cubic yards open cutting in soil, 4s. 9d.; 829 do. do., 4s. 6d.; 50 do. do., 4s. 9d.; 109 do. do., 5s. 6d.; 69 do. do., 4s. 9d.; 75 do. do., 5s. 16 lineal feet driving in soil, £1 16s.; 16 do. do., £1-16s.; 71-197 9-inch brickwork, £42. 93-278 14-inch brickwork; 1-175 do. do.; 4-26 do. do.; 5-194 do. do.; 5-194 do. do.; 3-216 do. do. 20,000 feet superficial rendering, 9d. 18 clay junctions, 19s. 9d.; 52 iron do., £2 18s. 6d.; 8 manholes, (fixing iron,) £2; 1 do., £3 0s. 6d.; 1 do., £5 19s.; 1 do., £3 5s.; 1 do., £5 10s.; 1 do., £4 3s. 5,412 cubic yards lead,  $\frac{1}{4}$ m., 3s. Diversion of sewer in Spring-street, and outlet to Tank Stream.

Elizabeth-street

CITY SEWERAGE WORKS.

*Elizabeth-street*—504 cubic yards open cutting in rock, 8s. 6d. 1,288 lineal feet driving in rock, £4; 370½ do. do., £4. 504 cubic yards open cutting in soil, 4s. 6d. 370½ lineal feet driving in soil, £1 18s. 43·17 9-inch brickwork, £42. 1,085 cubic yards lead, earth, ¼m., 4s. 6d. 13 iron junctions, and driving, £2 18s. 6d.

*Phillip-street*—222 cubic yards open cutting in rock, 8s. 9d. 2,203 lineal feet driving in rock, £4. 222 cubic yards open cutting in soil, 4s. 9d. 500 cubic yards lead, earth, ¼m., 3s

*Macquarie-street*—77 cubic yards open cutting in rock, 8s. 9d. 2,727 lineal feet driving in rock, £4. 77 cubic yards open cutting in soil, 4s. 9d.; 23 do. do., 4s. 9d. 31·160 9-inch brickwork, £42. 68·225 14-inch brickwork, £42. 464 junctions £12 7s.; 16 do., and driving, £1 6s. Fixing 2 manholes, £2. 1 manhole, 14 feet deep, £6 17s.; 1 do., 5 feet deep, £2 16s. 3,827 cubic yards lead, ¼m., 3s. 17,220 feet superficial rendering, 9d.

*Castlereagh-street*—450 lineal feet driving in rock, £4.

ABSTRACT.

		PRICE.					
		£	s.	d.	£	s.	d.
<i>Main Sewer.</i>							
87	cubic yards open cutting, at face, Fort Macquarie	0	8	0	34	16	0
343	" " " Quarry	0	8	9	150	1	3
128	" " " Macquarie Place	0	8	9	56	0	0
57	" " " soil	0	4	0	11	8	0
248	" " " " "	0	4	8	57	17	4
8	rods 77 feet brickwork in cement	42	0	0	346	11	4
119	superficial feet rendering	0	0	9	4	9	3
18	cubic yards concrete, junction Bridge street	0	15	0	13	10	0
50	" " " asphalt	1	10	0	75	0	0
1	manhole at "Star Hotel"	4	3	0	4	3	0
500	cubic yards lead, ¼m.	0	3	0	75	0	0
2,224	lineal feet driving in rock	5	0	0	11,120	0	0
<i>Bridge-street</i>					1,322	16	3
<i>Pitt-street.</i>							
40	cubic yards open cutting, rock	0	8	9	17	10	0
40	" " " soil	0	4	9	9	10	0
829	" " " rock	0	8	6	352	6	6
829	" " " soil	0	4	6	186	10	6
109	" " " rock	0	9	6	51	15	6
109	" " " soil	0	5	6	29	19	6
69	" " " rock	0	8	9	30	3	9
69	" " " soil	0	4	9	16	17	9
50	" " " rock	0	8	9	21	17	6
50	" " " soil	0	4	9	11	17	6
75	" " " rock	0	9	0	33	15	0
75	" " " soil	0	5	0	18	15	0
3,097	feet run. driving, rock	4	10	0	13,936	10	0
32	" " " "	4	0	0	128	0	0
16	" " " "	3	10	0	56	0	0
16	" " " "	3	10	0	56	0	0
16	lineal feet driving, soil	1	18	0	30	8	0
16	" " " "	1	18	0	30	8	0
71	rods 197 feet brickwork	42	2	0	7,819	13	0
114	" 165 " "						
20,000	superficial feet rendering	0	0	9	750	0	0
18	clay junctions and driving	0	19	9	17	15	6
52	iron " "	2	18	6	152	2	0
8	manholes (fixing ironwork)	2	0	0	16	0	0
1	" (brickwork)				3	0	6
1	" " "				5	10	0
1	" " "				5	19	0
1	" " "				4	3	0
1	" " "				3	5	0
5,412	cubic yards lead, earth, ¼m.	0	3	0	811	16	0
	Diversion of Spring-street Sewer				13	10	0
	Outlet to Tank Stream				158	2	3
<i>Elizabeth-street.</i>							
504	cubic yards open cutting, rock	0	8	6	214	4	0
504	" " " soil	0	4	6	113	8	0
1,288	feet driving, rock	4	0	0	5,152	0	0
370½	" " " soil	1	18	0	703	19	0
370½	" " " rock	4	0	0	1,482	0	0
43	rods 17 feet brickwork	42	0	0	1,808	0	0
1,085	cubic yards lead, ¼m.	0	4	6	244	2	6
13	iron junctions and driving	2	18	6	43	0	6
Carried forward					47,811	7	2

## CITY SEWERAGE WORKS.

5

## ABSTRACT—Continued.

		PRICE.					
		£	s.	d.	£	s.	d.
<i>Phillip-street.</i>							
	Brought forward	.....			47,811	15	2
222	cubic yards open cutting, rock...	0	8	9	97	2	6
222	" " " soil ...	0	4	9	52	14	6
2,203	feet rendering in rock ...	4	0	0	8,812	0	0
500	cubic yards lead, $\frac{1}{4}$ m. ...	0	3	0	75	0	0
<i>Macquarie-street.</i>							
23	cubic yards open cutting, soil ...	0	4	9	5	9	3
77	" " " rock ...	0	8	9	33	13	9
77	" " " soil ...	0	4	9	18	5	9
2,727	feet run. driving in rock ...	4	0	0	10,908	0	0
464	junctions ...	0	7	0	162	8	0
16	" and driving ...	1	6	0	20	16	0
3,827	cubic yards lead, earth, $\frac{1}{4}$ m. ...	0	3	0	574	1	0
2	manholes, fixing ...	2	0	0	4	0	0
1	" 14 feet deep ...	.....			6	17	0
1	" 5 " " ...	.....			2	16	0
17,220	superficial feet rendering ...	0	0	9	645	15	0
100	rods 79 feet brickwork in cement ...	42	0	0	4,210	17	0
<i>Castlereagh-street.</i>							
450	feet run. driving in rock ...	4	0	0	1,800	0	0
					£75,241	2	11
Less 10 $\frac{1}{2}$ cent. ...					7,524	0	0
					£67,717	2	11

Fair Copy of Memorandum Book.

Examined—JAS. COWLISHAW,  
17 July, 1856.

To 22 November, 1855.

No. 12.

*Main Sewer.*—19 cubic yards open cutting in rock, 8s.; 68 do. do., 8s.; 343 do. do., 8s. 9d.; 128 do. do., 8s. 9d. 2319 $\frac{1}{2}$  lineal feet driving in rock, £5. 57 cubic yards open cutting in soil, 4s.; 248 do. do., 4s. 8d. 8-77 14-inch brickwork, £42. 119 sup. feet rendering, 9s. 18 cubic yards concrete, 15s. 50 cubic yards asphalte, 30s. 500 cubic yards lead  $\frac{1}{4}$ m., 3s.

*Bridge-street.*—68 $\frac{1}{2}$  cubic yards open cutting in rock, 8s. 6d. 45 lineal feet driving in rock, £4. 352 $\frac{1}{2}$  cubic yards opening cutting in soil, 4s. 6d. 10-160 9-inch brickwork, £42. 5 junctions, 13s. Driving for ditto, each, 6s. 9d. 250 cubic yards lead, earth, 3s.

*Pitt-street.*—40 cubic yards open cutting in rock, 8s. 9d.; 829 do. do., 8s. 6d.; 50 do. do., 8s. 9d.; 109 do. do., 9s. 6d.; 69 do. do., 8s. 9d.; 75 do. do., 9s. 3,097 lineal feet driving in rock, £4 10s.; 32 do. do., £3 10s.; 16 do. do. £3 10s.; 16 do. do., £3 10s. 40 cubic yards open cutting in soil, 4s. 9d.; 829 do. do., 4s. 6d.; 50 do. do., 4s. 9d.; 109 do. do., 5s. 6d.; 69 do. do., 4s. 9d.; 75 do. do., 5s. 16 lineal feet driving in soil, £1 16s.; 16 do. do., £1 16s. 72-254 9-inch brickwork, £42. 93-278 14-inch brickwork; 1-175 do.; 4-26 do.; 5-194 do.; 5-194 do.; 5-194 do., £42. 20,000 superficial feet rendering, 9d. 18 clay junctions, 19s. 9d. 52 iron do., 58s. 6d. 8 manholes, fixing, £2 each. 1 do. brick, £3 0s. 6d.; 1 do. do., £5 19s.; 1 do. do., £4 3s.; 1 do. do., £5 10s.; 1 do. do., £3 5s. 5,412 cubic yards lead, earth,  $\frac{1}{4}$ m., 3s. Diversion of Spring-street sewer into Pitt-street and outlet to Tank Stream.

*Elizabeth-street.*—504 cubic yards open cutting in rock, 8s. 6d. 1,463 lineal feet driving in rock, £4; 370 $\frac{1}{2}$  do. do., £4. 504 cubic yards open cutting in soil, 4s. 6d. 370 $\frac{1}{2}$  lineal feet driving in soil, £1 18s. 43-17 9-inch brickwork, £42. 1,085 cubic yards lead,  $\frac{1}{4}$ m., 3s. 13 junctions and driving, 58s. 6d.

*Phillip-street.*—222 cubic yards open cutting in rock, 8s. 9d. 2,223 lineal feet driving in rock, £4. 222 cubic yards open cutting in soil, 4s. 9d. 5-132 9-inch brickwork, £42. 500 cubic yards lead, earth,  $\frac{1}{4}$ m., 3s.

*Macquarie-street.*—77 cubic yards open cutting in rock, 8s. 9d. 2,727 lineal feet driving in rock, £4. 77 cubic yards open cutting in soil, 4s. 9d.; 23 do. do., 4s. 9d. 79 junctions at 4s. 16 do., at 26s. 3,827 cubic yards lead,  $\frac{1}{4}$ m., 3s. Fixing 2 manholes, each £2. Brickwork, 1 manhole 14 feet deep, £6 17s.; 1 do. do., 5 feet deep, £2 16s. 17-220 superficial feet rendering, 9d. 31-160 9-inch brickwork, £42. 68-225 14-inch brickwork, £42.

*Castlereagh-street.*—968 lineal feet driving in rock, £4. 228 lineal feet driving in soil; £1 18s.; 75 do. do., £1 18s.

## ABSTRACT.

		PRICE.			£ s. d.		
		£	s.	d.	£	s.	d.
<i>Main Sewer.</i>							
87	Cubic yards open cutting in rock, at face, Fort Macquarie .. ...	0	8	0	34	16	0
343	" " Quarry, Phillip-street	0	8	9	150	1	3
128	" " Macquarie Place ...	0	8	9	56	0	0
248	" " in soil ...	0	4	8	57	17	4
57	" " in soil, gas and water mains, Macquarie-place ...	0	4	0	11	8	0
8	rods 77 feet brickwork, in cement, at per rod...	42	0	0	346	11	4
2,309½	feet run. driving in rock, (main tunnel) ...	5	0	0	11,547	10	0
119	superficial feet rendering in cement ...	0	0	9	4	9	3
18	cubic yards concrete } bottom of junction in {	0	15	0	13	10	0
50	" asphalt } Bridge-street ... {	1	10	0	75	0	0
500	" lead, ¼m. ...	0	3	0	75	0	0
<i>Bridge-street.</i>							
68½	cubic yards open cutting in rock ...	0	8	6	29	2	6
45	feet run driving in rock ...	4	0	0	180	0	0
352½	cubic yards open cutting in soil ...	0	4	6	79	6	3
10	rods 160 feet brickwork, in cement ...	42	0	0	441	19	2
5	junctions, 12-inch pipes and fixing ...	0	13	0	3	5	0
5	" " driving... ...	0	6	9	1	13	9
250	cubic yards lead, ¼m. ...	0	3	0	37	10	0
<i>Pitt-street.</i>							
40	cubic yards open cutting in rock... ..	0	8	9	17	10	0
40	" " soil ...	0	4	9	9	10	0
829	" " rock ...	0	8	6	352	6	6
829	" " soil ...	0	4	6	186	10	6
50	" " rock } Hunter-st. {	0	8	9	21	17	6
50	" " soil } junction {	0	4	9	11	17	6
109	" " rock } King-street {	0	9	6	51	15	6
109	" " soil } junction {	0	5	6	29	19	6
69	" " rock } Market-st. {	0	8	9	30	3	9
69	" " soil } junction {	0	4	9	16	7	9
75	" " rock } Park-street {	0	9	0	33	15	0
75	" " soil } junction {	0	5	0	18	15	0
3,097	feet run. driving in rock ...	4	10	0	13,936	10	0
32	" " " ...	3	10	0	112	0	0
16	" " " ...	1	16	0	28	16	0
16	" " " ...	1	16	0	28	16	0
16	" " " ...	3	10	0	56	0	0
16	" " " ...	3	10	0	56	0	0
189	rods 93 feet brickwork, cement... ..	42	0	0	7,950	15	3
20,000	superficial feet rendering in cement ...	0	0	9	750	0	0
	fixing 8 manholes, plates, each... ..	2	0	0	16	0	0
1	" " brickwork ...				3	0	6
1	" " " ...				5	19	0
1	" " " ...				4	3	0
1	" " " ...				5	10	0
1	" " " ...				3	5	0
5,412	cubic yards lead, ¼m. ...	0	3	0	811	16	0
	Diversion of Sewer in Spring-street ...				13	10	0
	Outlet to Tank Stream... ..				158	2	3
<i>Elizabeth-street.</i>							
504	cubic yards open cutting in rock ...	0	8	6	214	4	0
504	" " soil ...	0	4	6	113	8	0
1,463	feet run. driving in rock ...	4	0	0	5,852	0	0
370½	" " " ...	4	0	0	1,482	0	0
370½	" " soil ...	1	18	0	703	19	0
1,085	cubic yards lead, earth, ¼m. ...	0	4	6	244	2	6
13	junctions and driving ...	2	18	6	38	0	6
43	rods 17 feet brickwork in cement ...	42	0	0	1,818	6	8
<i>Phillip-street.</i>							
222	cubic yards open cutting in rock ...	0	8	9	97	2	6
222	" " soil ...	0	4	9	52	14	6
2,223	feet run. driving in rock ...	4	0	0	8,892	0	0
500	cubic yards lead ¼m. ...	0	3	0	75	0	0
5	rods 132 feet brickwork in cement ...	42	0	0	228	2	4
<i>Macquarie-street.</i>							
77	cubic yards open cutting in rock ...	0	8	9	33	13	9
77	" " soil ...	0	4	9	18	5	9
2,727	feet run. driving in rock ...	4	0	0	10,908	0	0
	Carried forward ...				10,103	19	7

ABSTRACT



ABSTRACT—Continued.

		PRICE.			£ s. d.		
Brought forward...		.....			10,103 18 7		
<i>Macquarie-street—Continued.</i>							
23	cubic yards open cutting in soil	0	4	9	5	9	3
79	junctions	0	4	0	15	16	0
16	"	1	6	0	20	16	0
3,827	cubic yards lead, ¼m.	0	3	0	574	1	0
	fixing 2 manholes, each	2	0	0	4	0	0
	brickwork for ditto, 1.14 ft. deep	.....			6	17	0
	" 1.5 "	.....			2	16	0
17,220	superficial feet rendering	0	0	9	645	15	0
100	rods 79 feet brickwork in cement	42	0	0	4,210	16	10
<i>Castlereagh-street.</i>							
968	feet run. driving in rock	4	0	0	3,872	0	0
228	" " soil	1	18	0	433	4	0
75	" " "	1	18	0	142	10	0
<i>Omitted in Pitt-street.</i>							
18	clay junctions	0	19	9	17	15	6
52	iron do.	2	18	6	152	2	0
					£78,740 9 5		

Fair Copy of Memorandum Book.

WM. TOMS.

Examined—JAS. COWLISHAW,  
17 July, 1856.

To 6 December, 1855.

No. 13.

*Main Sewer.*—(See Certificate No. 12.)

*Bridge-street.*—68½ cubic yards open cutting in rock, 8s. 6d. 45 lineal feet driving in rock, £4. 352½ cubic yards open cutting in soil, 4s. 6d. 10-160 9-inch brickwork, £42. 5 junctions, clay, 13s. getting out 5 junction holes, each 6s. 9d. 2,034 superficial feet rendering in cement, 9d. 250 cubic yards lead, ¼m., 3s.

*Pitt-street.*—829 cubic yards open cutting in rock, 8s. 6d.; 50 do. do., 8s. 6d.; 109 do. do., 9s. 6d.; 69 do. do., 8s. 9d.; 75 do. do., 9s. 3,097 lineal feet driving in rock, £4 10s.; 32 do. do., £3 10s.; 16 do. do., £3 10s.; 16 do. do., £3 10s. 829 cubic yards open cutting in soil, 4s. 6d.; 50 do. do., 4s. 6d.; 109 do. do., 5s. 6d.; 69 do. do., 4s. 9d.; 75 do. do., 5s. 16 lineal feet driving in soil, £1 16s.; 16 do. do., £1 16s. 70-140 9-inch brickwork, £42. 97-78 14-inch brickwork; 1-175 do.; 4-26 do.; 5-194 do.; 5-194 do.; 5 194 do., £42. 20,000 superficial feet rendering, 9d. 8 manholes, £2. 1 manhole, £3 0s. 6d.; 1 do., £5 19s.; 1 do., £4 3s.; 1 do., £5 10s.; 1 do., £3 10s. 5,412 cubic yards lead earth, ¼m., 3s. 18 clay junctions, 19s. 9d. 52 iron junctions, 58s. 6d. Diversion of Spring-street Sewer and Outlet to Tank Stream.

*Elizabeth-street.*—(See Certificate No. 12.)

*Phillip-street.*

222 cubic yards open cutting in rock, 8s. 9d. 2,223 lineal feet driving in rock, £4. 222 cubic yards open cutting in soil, 4s. 9d. 10-18 9-inch brickwork, £42. 500 cubic yards lead, ¼m., 3s.

*Macquarie-street,* (tested by chain by Messrs. Parker & Mais).—77 cubic yards open cutting in rock, 8s. 9d. 2,807 lineal feet driving in rock, £4. 77 cubic yards open cutting in soil, 4s. 9d.; 23 do. do., 4s. 9d. 66-229 9-inch brickwork, £42. 33-176 14-inch brickwork, £42. 79 junctions, clay, 4s. 16 do. driving holes, 26s. 3,827 cubic yards lead, ¼m., 3s. 1 manhole, 14 feet, £6 17s.; 1 do., 5 feet, £2 16s. Fixing manholes (2), £2. 17,220 superficial feet rendering, 9d.

*Castlereagh-street.*—968 lineal feet driving in rock, £4. 475 lineal feet driving in soil, £1 18s.

ABSTRACT.

		PRICE.			£ s. d.		
<i>Main Sewer.</i>		.....			.....		
87	cub. yds. open cutting rock, at Fort Macquarie	0	8	0	34	16	0
343	" " Quarry, Phillip-st.	0	8	9	150	1	3
128	" " Macquarie-place	0	8	9	56	0	0
248	" soil	0	4	8	57	17	4
57	" gas and water pipes	0	4	0	11	8	0
2-319½	feet run. driving in rock	5	0	0	11,597	10	0
8	rods 77 feet brickwork in cement	42	0	0	346	11	4
119	superficial feet rendering	0	0	9	4	9	3
18	yards concrete } junction in Bridge-street	0	15	0	13	10	0
50	" asphalte }	1	10	0	75	0	0
500	cubic yards lead earth, ¼m.,	0	3	0	75	0	0
Carried forward					12,422 3 2		

ABSTRACT

## ABSTRACT—Continued.

		PRICE.					
		£	s.	d.	£	s.	d.
Brought forward...					12,422	3	2
<i>Bridge-street.</i>							
68½	cubic yards open cutting in rock	0	8	6	29	2	6
45	feet driving in rock	4	0	0	180	0	0
352½	cubic yards open cutting in soil	0	4	6	79	6	3
10	rods 160 feet brickwork in cement	42	0	0	441	19	2
5	junction pipes 12-inch, cement and fixing	0	13	0	3	5	0
250	cubic yards lead earth, ¼m.	0	3	0	37	10	0
5	junctions (driving)	0	6	9	1	13	9
2,034	superficial feet rendering in cement	0	0	9	76	5	6
<i>Pitt-street.</i>							
829	cubic yards open cutting in rock	0	8	6	352	6	6
829	" " soil	0	4	6	186	10	6
50	" " rock	0	8	9	21	17	6
50	" " soil	0	4	9	11	17	6
109	" " rock	0	9	6	51	15	6
109	" " soil	0	5	6	29	19	6
69	" " rock	0	8	9	30	3	9
69	" " soil	0	4	9	16	7	9
75	" " rock	0	9	0	33	15	0
75	" " soil	0	5	0	18	15	0
3,097	feet run. driving in rock	4	10	0	13,936	10	0
32	" " soil	3	10	0	112	0	0
16	" " soil	1	16	0	28	16	0
16	" " soil	1	16	0	28	16	0
16	" " rock	3	10	0	56	0	0
16	" " soil	3	10	0	56	0	0
190	rods 83 feet brickwork in cement	42	0	0	7,991	7	10
20,000	superficial feet rendering	0	0	9	750	0	0
8	manholes, fixing plate	2	0	0	16	0	0
1	" brickwork				3	0	6
1	" " "				5	19	0
1	" " "				4	3	0
1	" " "				5	10	0
1	" " "				3	5	0
5,412	cubic yards lead earth, ¼m.	0	3	0	811	16	0
	Diversion of Spring-street Sewer				13	10	0
	Outlet to Tank Stream...				158	2	3
<i>Elizabeth-street.</i>							
504	cubic yards open cutting in rock	0	8	6	214	4	0
504	" " soil	0	4	6	113	8	0
1,463	feet run. driving rock	4	0	0	5,852	0	0
370½	" " "	1	18	0	703	19	0
370½	" " "	4	0	0	1,482	0	0
1,085	cubic yards lead, ¼m.	0	4	6	244	2	6
13	junctions and driving	2	18	6	38	0	6
43	rods 17 feet brickwork	42	0	0	1,808	6	8
<i>Phillip-street.</i>							
222	cubic yards open cutting in rock	0	8	9	97	2	6
222	" " soil	0	4	9	52	14	6
2,223	feet run. driving rock	4	0	0	8,892	0	0
500	cubic yards lead earth, ¼ m.	0	3	0	75	0	0
10	rods 18 feet brickwork	42	0	0	422	9	4
<i>Macquarie-street.</i>							
77	cubic yards open cutting, rock...	0	8	9	33	13	9
77	" " soil	0	4	9	18	5	9
2,807	feet run. driving in rock	4	0	0	11,228	0	0
79	junctions, 12-inch, clay	0	4	0	15	16	0
16	" and driving	1	6	0	20	16	0
23	cubic yards open cutting, soil	0	4	9	5	9	3
3,827	" lead, ¼ m.	0	3	0	574	1	0
	fixing 2 manhole plates, each	2	0	0	4	0	0
	brickwork for ditto, 1-14 feet deep				6	17	0
	" " 1-5 "				2	16	0
17,220	superficial feet rendering in cement	0	0	9	645	15	0
100	rods 99 feet brickwork in cement	42	0	0	4,213	11	9
<i>Castlereagh-street.</i>							
968	feet run. driving in rock	4	0	0	3,872	0	0
475	" " soil	1	18	0	902	10	0
					£79,544	7.11	

Fair copy of Memorandum Book,  
Examined—JAS. COWLISHAW,  
17 July, 1856.

WM. TOMS.

ABSTRACT

## CITY SEWERAGE WORKS.

9

## ABSTRACT.

To 31 December, 1855.

No. 14.

		£	s.	d.	£.	s.	d.
<i>Main Sewer.</i>							
87-3	cubic yards excavation in rock, Fort Macquarie, 6 feet deep, at 8s. ... ..	34	16	10			
399	cubic yards excavation in rock, Quarry, 15 feet deep, at 9s. ... ..	179	11	0			
35-3	cubic yards excavation in rock, manhole, Macquarie-street, 20 feet deep, at 9s. 6d ... ..	16	13	6			
19-26	cubic yards excavation in rock, Elizabeth-street, 12 feet deep, at 8s. 9d. ... ..	8	14	8			
217-8	cubic yards excavation in rock, "Star Hotel," 15 feet deep, at 9s. ... ..	97	15	8			
123-8	cubic yards excavation in rock, "Star Hotel," 12 feet deep, at 8s. 9d. ... ..	53	18	10			
73-2	cubic yards excavation in soil, "Star Hotel," 12 feet deep, 4s. 9d. ... ..	17	7	1			
69-24	cubic yards excavation in soil, "Star Hotel" junction, 12 feet deep, at 4s. 9d. ... ..	16	11	11			
10-2	cubic yards excavation in soil, concrete under sewer, 12 feet deep, at 4s. 9d. ... ..	2	7	8			
57	cubic yards excavation in soil, raising gas and water mains, 6 feet deep, at 4s. ... ..	11	8	0			
1463	lineal feet driving, from Fort to the Quarry, at £5	7,315	0	0			
750-10	ditto, in rock, from ditto to Macquarie-place, at £5 ... ..	3,754	3	4			
6-201	rods brickwork in cement, at £42 ... ..	283	8	8			
16-18	cubic yards of concrete, for main sewer and junction, at 15s. ... ..	12	10	0			
17½	cubic yards of asphalt, on crown of junction, at 35s.	30	12	6			
737-5	superficial feet rendering, in cement, at 9d. ... ..	27	13	1			
867-14	cubic yards lead, ¼ m., at 3s. ... ..	130	2	6			
1	manhole, near "Star Hotel," at 83s. ... ..	4	3	0			
					11,996	18	3
	<i>Less</i> £100, to be deducted for dressing near Water Police Office ... ..				100	0	0
					11,896	18	3
<i>Pitt-street Sewer. (4.6 × 3.0.)</i>							
953-22	cubic yards excavation in rock, from Bridge to Hunter-street, 12 feet deep, at 8s. 9d. ... ..	417	5	10			
953-22	cubic yards excavation in soil, from Bridge to Hunter-street, 12 feet deep, at 4s. 9d. ... ..	226	10	7			
558-24	cubic yards excavation, outlet to Tank Stream, 12 feet deep, at 4s. 9d. ... ..	132	14	8			
75-1	cubic yards excavation in rock, Hunter-street junction, 12 feet deep, at 8s. 9d. ... ..	32	16	7			
75-1	cubic yards excavation in soil, Hunter-street junction, 12 feet deep, at 4s. 9d. ... ..	17	16	5			
48-2	cubic yards excavation in rock for branches, Hunter-street, 12 feet deep, at 8s. 9d. ... ..	21	0	7			
48-2	cubic yards excavation in soil for branches, Hunter-street, 12 feet deep, at 4s. 9d. ... ..	11	8	4			
399-4	cubic yards excavation in rock, junctions of King, Market, and Park Streets, 15 feet deep, at 9s.	179	12	4			
399-4	cubic yards excavation in soil, junctions of King, Market, and Park Streets, 15 feet deep, at 5s.	99	15	9			
30-7	{ cubic yards { 5 manholes, av. } 12 ft. deep, at 4s. 9d.	7	3	8			
	{ excavation { depth 12 feet, } 12 ft. deep, at 4s. 9d.						
15-3	{ cubic yards { one-third rock & } 12 ft. deep, at 8s. 9d.	6	12	2			
	{ excavation { two-thirds soil. } 12 ft. deep, at 8s. 9d.						
3007-2	lineal feet tunnelling in rock, at £4 10s. ... ..	13,532	5	0			
54	" " " at £4 10s. ... ..	240	15	0			
53	" " " at £4 10s. ... ..	238	10	0			
91-8	" " " for King, Market, and Park-street branches, at 70s. ... ..	320	16	8			
203-52	rods brickwork, in cement, at £42 ... ..	8,534	0	7			
20249-9	superficial feet rendering in cement, at 9d. ... ..	759	7	3			
234	lineal feet of 12-in. pipes, laid for outlet to Tank Stream, at 4d. ... ..	3	18	0			
12	lineal feet of 9-in. pipes, laid in cement, Spring-street, at 6d. ... ..	0	6	0			
6	manholes, of average depth, 11 feet, at £5 10s. ... ..	33	0	0			
8	iron plates, fixed, at 40s. ... ..	16	0	0			
	Carried forward ... ..	£24,831	15	5			
	Carried forward ... ..				11,896	18	3

## ABSTRACT—Continued.

		£	s.	d.	£	s.	d.
Brought forward...		24,831	15	5	11,896	18	3
<i>Pitt-street Sewer—Continued.</i>							
13	clay junction pipes, 12-inch, fixed, at 13s.	8	9	0			
99	iron " " " at 45s. 6d.	225	4	6			
112	holes excavated in rock, at 8s.	44	16	0			
14	feet brickwork in cement, at £42 per rod	2	3	2			
7·21	cubic yards of asphalt, at 35s.	13	12	2			
4009·9	" " lead, $\frac{1}{2}$ m., at 4s. 6d.	902	2	0			
					26,028	2	3
<i>Elizabeth-street Sewer. (3·6×2·4.)</i>							
387·4	lineal feet driving in rock, at 80s.	1,549	6	8			
387·4	" " " soil, at 38s.	735	18	8			
1464	" " " rock, at 80s.	5,856	0	0			
618·20	cub. yds. excavation in rock, 10 feet deep, at 8s. 6d.	262	19	3			
618·20	" " " soil, " " 4s. 6d.	139	4	4			
9·7	" " " manhole, No. 1, 10 ft., 4s. 6d.	2	1	8			
5·3	" " " " No. 2, 6 " 4s.	1	0	5			
42·4	rods brickwork in cement, at £42	1,764	12	4			
4275·7	superficial feet rendering, in cement, at 9d.	160	6	8			
1	manhole, 14 feet deep	6	17	0			
1	" " 9 " "	4	12	0			
13	clay pipes, junctions, 12-inch, at 13s.	8	9	0			
11	iron " " " at 45s. 6d.	25	0	6			
24	holes for junctions, in rock, at 8s.	9	12	0			
2	manhole plates, fixed, at 40s.	4	0	0			
1229·5	cubic yards lead, $\frac{1}{2}$ m., at 4s. 6d.	276	11	4			
					10,806	11	10
<i>Castlereagh-street Sewer. (3·6×2·4.)</i>							
1305·4	lineal feet driving, in rock, at 80s.	5,221	6	8			
72·9	" " " soil, at 38s.	138	4	6			
					5,359	11	2
<i>Phillip-street Sewer. (3·6×2·4.)</i>							
2298	lineal feet, driving in rock, at 80s.	9,192	0	0			
229·5	cubic yards excavation, in rock, 15 feet deep, at 9s.	103	2	8			
229·5	" " " soil, 15 feet deep, at 5s.	57	5	11			
27·237	rods brickwork in cement, at £42	1,170	11	11			
4155·9	superficial feet rendering in cement, at 9d.	115	17	4			
33	cast-iron junctions, 12-inch, at 45s. 6d.	75	1	6			
33	holes for junctions, rock, at 8s.	13	4	0			
571·14	cubic yards lead, $\frac{1}{4}$ m., at 3s.	85	14	6			
					10,812	17	10
<i>Macquarie-street Sewer. (3·6×2·4.)</i>							
30·15	cubic yards excavation in soil, for outlet, 6 feet deep, at 4s.	6	2	2			
87·21	cub. yds. excavation in rock, 12 feet deep, at 8s. 9d.	38	8	0			
87·21	" " " soil " " at 4s. 9d.	20	16	11			
2743	lineal feet driving in rock, at 80s.	10,972	0	0			
80	lineal feet, 12-inch pipes, for outlet, at 4d.	1	6	8			
95·160	rods brickwork in cement, at £42	4,014	14	1			
3795	superficial feet rendering in cement, at 9d.	142	6	3			
62	12-inch collars, at 4s.	12	8	0			
2	manholes, 11·6 deep, at £5 14s. 6d.	11	9	0			
3	manhole plates, at £2	6	0	0			
13	lineal feet of curbing to manhole No. 2, at 1s.	0	13	0			
194·9	cubic yards lead, $\frac{1}{4}$ m., at 3s.	292	7	0			
325	" " " $\frac{1}{2}$ m., at 4s. 6d.	73	2	6			
					15,591	13	7
<i>Bridge-street Sewer. (3·6×2·6.)</i>							
398·21	cub. yds. excavation in soil, 10 feet deep, at 4s. 6d.	89	14	6			
73·10	" " " rock, " " at 8s. 6d.	31	3	7			
45	lineal feet driving in rock, at £4...	180	0	0			
9·155	rods brickwork, in cement, at £42	401	18	8			
477·3	superficial feet rendering, at 9d.	17	17	11			
5	clay junctions, at 13s.	3	5	0			
5	holes for junctions, soil, at 4s.	1	0	0			
288	cubic yards lead, $\frac{1}{4}$ m., at 3s.	43	4	0			
					768	3	8
					81,263	18	7
Less deduction for clearing up Philip-street ...					50	0	0
					81,213	18	7

Fair Copy of Memorandum Book,

Examined—JAS. COWLISHAW.  
17 July, 1856.

WM. TOMS.

To 24 January, 1856.

No. 15.

*Main Sewer* (6·0 × 4·0).—6·10 lineal feet driving in rock, £5.*Phillip-street Sewer* (3·6 × 2·4).—1,897·6 superficial feet rendering in cement, 9d. 11 cast iron junctions, 12-inch, 45s. 6d. 11 holes, junctions, rock, 8s. 991 cubic yards lead,  $\frac{1}{4}$ -m., 3s. 9 rods 100 feet 9-inch brickwork, £42.*Elizabeth-street Sewer* (3·6 × 2·4).—236·11 lineal feet driving in rock, 80s. 190·5 cubic yards lead,  $\frac{1}{2}$ -m., 4s. 6d.

## ABSTRACT.

		PRICE.						
		£	s.	d.	£	s.	d.	
<i>Main Sewer.</i>								
6·10	lineal feet tunnelling in rock ... ..	5	0	0	34	3	4	
<i>Phillip-street Sewer.</i>								
9·100	rods brickwork in cement (3·6 sewer) ... ..	42	0	0	393	8	9	
1897·6	superficial feet rendering ... ..	0	0	9	71	3	1	
11	cast-iron 12-inch junction pipes ... ..	2	5	6	25	0	6	
11	holes for do., in rock ... ..	0	8	0	4	8	0	
991	cubic yards lead, $\frac{1}{4}$ -m. ... ..	0	0	3	148	13	0	
<i>Elizabeth-street.</i>								
236·11	lineal feet tunnelling in rock ... ..	4	0	0	947	13	4	
190·5	cubic yards lead, $\frac{1}{2}$ -m. ... ..	0	4	6	42	15	10	
					£1,667	5	10	
Less 10 $\frac{3}{4}$ cent. ... ..						166	14	7
					£1,500	11	3	

Fair Copy of Memorandum Book,

Examined—JAS. COWLISHAW.  
17 July, 1856.

WM. TOMS.

To 7 February, 1856.

No. 16.

*Main Sewer*.—11·9 cubic yards open cutting in rock, 10s. 6d. 53 lineal feet driving in rock, £5.*Phillip-street*.—24·10 cubic yards open cutting in rock, 8s. 9d. 7 cubic yards open cutting in soil, 4s. 3d.; 24·10 do. do., 4s. 9d. 7 rods 196 feet 9-inch brickwork, £42; 160 feet do. do., £42 per rod; manhole, £3 14s. 1,207 superficial feet rendering, 9d. 8 cast-iron junctions, 45s. 6d. 8 holes for do., rock, 8s. 1 manhole plate, £2.*Castlereagh-street*.—3 rods 203 feet 9-inch brickwork, £42. 4 junctions, 45s. 6d. 4 holes, rock, 8s.*Elizabeth-street*.—411·6 lineal feet driving in rock, £4.

## ABSTRACT.

		PRICE.						
		£	s.	d.	£	s.	d.	
<i>Main Sewer.</i>								
53	lineal feet tunnelling in rock ... ..	5	0	0	265	0	0	
11·9	yards excavation in rock, for manhole, not exceeding 30 feet ... ..	0	10	6	5	19	0	
<i>Phillip-street Sewer</i> (3·6 × 2·4).								
7·196	rods brickwork in cement ... ..	42	0	0	324	5	3	
1,207·6	superficial feet rendering in cement ... ..	0	0	9	45	5	7	
8	cast-iron junction pipes, fixed ... ..	2	5	6	18	4	0	
8	holes for do. in rock ... ..	0	8	0	3	4	0	
7	cubic yards excavation in soil, for manhole brickwork for ditto, 6 feet deep ... ..	0	4	3	1	9	9	
	.....				3	14	0	
1	iron plate, fixed... ..	2	0	0	2	0	0	
24·10	yards excavation in soil, Bridge-street junction	0	4	9	5	15	9	
24·10	yards excavation in rock, ditto ... ..	0	8	9	10	13	2	
160	feet brickwork in cement, at per rod ... ..	42	0	0	24	14	1	
<i>Castlereagh-street</i> (3·6 × 2·4).								
3·203	rods brickwork in cement ... ..	42	0	0	157	6	10	
4	iron junction pipes ... ..	2	5	6	9	2	0	
4	holes for ditto ... ..	0	8	0	1	12	0	
<i>Elizabeth-street</i> (3·6 × 2·4).								
411·6	lineal feet tunnelling in rock ... ..	4	0	0	1,646	0	0	
					2,524	5	5	
Less 10 $\frac{3}{4}$ cent. ... ..						252	8	0
					£2,271	17	5	

Fair Copy of Memorandum Book,

Examined—JAS. COWLISHAW.  
17 July, 1856.

WM. TOMS.

From

From 7 February to 20 February, 1856.

No. 17.

*Main Sewer.*—96·6 lineal feet driving in rock, £5. Lead from Quarry, 91½ cubic yards, 1½m., 6s.; do. do, 200 do., 1½m., 3s.; do. from No. 9, 35 do., 1½m., 6s.; do. do., 28 do., 1½m., 6s. 9d.

*Phillip-street Sewer.*—North end, 4 rods 78 feet 9-inch brickwork, £42; South end, 7 rods 267 feet do. do., £42; Bridge-street junction, 150 feet do. do., £42. per rod. 13 cast-iron junctions, £2 5s. 6d. 13 holes, 8s. Lead, 28¾ cubic yards, 1½ m., 6s. 2,631 superficial feet rendering, 9d.

*Elizabeth-street Sewer.*—378 lineal feet driving in rock, £4. Lead, 108½, 1 m., 5s. 6d.

*Castlereagh-street Sewer.*—1,105·6 superficial feet rendering, 9d. 6 cast-iron junctions, £2 5s. 6d. 6 holes for do., 8s. Lead, 68½ cubic yards, 1½ m., 6s. 5 rods 91 feet 9-inch brickwork, £42.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i>						
96·6 lineal feet driving in rock	5	0	0	482	10	0
200 cub yds. lead from Quarry to Tank Stream, ½m.	0	3	0	30	0	0
126½ " " " and No. 9 to Haymarket, 1½	0	6	0	37	17	6
28 " " " " to Botany Road 1½	0	6	9	9	9	0
<i>Phillip-street Sewer.</i>						
12 rods 223 feet reduced brickwork, in cement	42	0	0	538	8	8
13 cast-iron junctions, 12-inch	2	5	6	29	11	6
13 holes excavated for do.	0	8	0	5	4	0
28¾ cubic yards lead, 1½ miles, to Haymarket	0	6	0	8	12	6
2,631 superficial feet rendering in cement	0	0	9	98	13	3
<i>Elizabeth-street Sewer.</i>						
378 lineal feet driving in rock	4	0	0	1,512	0	0
108½ cubic yards lead, 1 m., to Haymarket	0	5	6	29	15	4
<i>Castlereagh-street Sewer.</i>						
5·91 Brickwork in cement	42	0	0	224	1	0
1,105·6 superficial feet rendering in cement	0	0	9	41	9	1
6 cast-iron junctions, 12-inch	2	5	6	13	13	0
6 holes for do.	0	8	0	2	8	0
68½ cubic yards lead, 1½m., to Haymarket...	0	6	0	20	11	0
				£3,084	3	10
Less 10 ⅓ cent.				308	8	4
				£2,775	15	6

Fair Copy of Memorandum Book.

Examined—JAS. COWLISHAW.  
17 July, 1856.

WM. TOMS.

From 20 February to 3 March, 1856.

No. 18.

*Main Sewer.*—28 lineal feet driving in rock, £5. 11·97 rods 14-inch brickwork, £42. 760 superficial feet rendering in cement, 9d. 2 cast-iron junctions, 12-inch, £2 5s. 6d. 2 holes for do., 8s.

*Elizabeth-street Sewer.*—124·6 lineal feet driving in rock, £4. 216 feet 3 inches 9-inch brickwork, £42 per rod. 1 manhole, 6·6 feet deep, £3 9s. 6d. 1 plate fixed, £2

*Castlereagh-street Sewer.*—3·195 rods 9-inch brickwork, £42. 1,393 superficial feet rendering, 9d. 5 cast-iron junctions, £2 5s. 6d. 5 holes in do., 8s. 1 manhole, 8 feet 3 inches deep, £4 5s. 3d. 1 plate fixed, £2. 5 cubic yards 4 feet open cutting in rock, 8s. 6d. 2 cubic yards 15-foot open cutting in soil, 4s. 6d.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i> (60×4·0.)						
28 feet lineal driving in rock	5	0	0	140	0	0
11·97 rods reduced brickwork in cement	42	0	0	476	19	6
760 superficial feet rendering	0	0	9	28	10	0
2 cast-iron junctions, 12-inch	2	5	6	4	11	0
2 holes for do. in rock	0	8	0	0	16	0
<i>Elizabeth-street Sewer.</i> (3·6×2·4 & 9-inch work.)						
124·6 lineal feet driving in rock	4	0	0	498	0	0
216·3 feet reduced brickwork, at per rod	42	0	0	33	7	9
1 manhole, 6 feet 6 inches deep	.....			3	9	6
1 " plate fixed	2	0	0	2	0	0
Carried forward				£1,187	13	9

ABSTRACT

## CITY SEWERAGE WORKS.

13

## ABSTRACT—Continued.

		PRICE.			£ s. d.		
		£	s.	d.	£	s.	d.
Brought forward ... ..		.....			1,187	13	9
<i>Castlereagh-street Sewer.</i> (3·6×2·4 & 9-inch work.) ...							
3·195	rods reduced brickwork in cement ... ..	42	0	0	156	2	2
1,393	superficial feet rendering ... ..	0	0	9	52	4	9
5	cast-iron junctions, 12-inch ... ..	2	5	6	11	7	6
5	holes for do., in $\frac{2}{3}$ rock and $\frac{1}{3}$ soil ... ..	0	6	8	1	13	4
1	manhole, 8 feet 3 inches deep, 9-inch work ...	.....			4	5	3
1	„ plate fixed ... ..	2	0	0	2	0	0
5	cubic yards 4 feet ( $\frac{2}{3}$ & $\frac{1}{3}$ ) excavation in rock } for manhole, depth 10 feet ... ..	0	8	6	2	3	9
2	cubic yards 15 feet excavation in soil for } manhole, depth 10 feet ... ..	0	4	6	0	11	6
					£1,418	2	0
Less 10 per cent. ...					141	16	2
					£1,276	5	10

Fair Copy of Memorandum Book.

Examined—JAS. COWLISHAW.  
17 July, 1856.

WM. TOMS.

From 3 to 17 March, 1856.

No. 19.

*Main Sewer* (6×4).—78·2 lineal feet driving in rock, £4 10s. 15·174 rods 14-in. brickwork, £42. 5 junctions, 45s. 6d. 1 manhole, £2.*Elizabeth-street* (3·6×2·4).—91·4 lineal feet driving in rock, £3 10s.

## ABSTRACT.

		PRICE.			£ s. d.		
		£	s.	d.	£	s.	d.
<i>Main Sewer.</i>							
78·2	lineal feet tunnelling in rock ... ..	4	10	0	351	15	0
15·174	rods reduced brickwork in cement ... ..	42	0	0	656	17	4
5	cast-iron junctions, pipes fixed ... ..	2	5	6	11	7	6
1	manhole plate fixed ... ..	2	0	0	2	0	0
<i>Elizabeth-street.</i>							
91·4	tunnelling in rock ... ..	3	10	0	319	13	4
					1,341	13	2
Less 10 per cent .....					134	3	4
					£1,207	9	10

Fair Copy of Memorandum Book,

Examined—JAS. COWLISHAW.  
17 July, 1856.

WM. TOMS.

## ABSTRACT.

No. 20.

To 31 March, 1856.

		£ s. d.			£ s. d.		
<i>Main Sewer.</i>							
63·13·5	cubic yards excavation in rock, Fort Macquarie, 6 feet deep, at 8s. ... ..	25	8	0			
398·26·8	cubic yards excavation in rock, Quarry, 15 feet deep, at 9s. ... ..	179	10	11			
23·9·0	cubic yds. excavation in rock, manhole, Macquarie- street, 25 feet deep, at 10s. ... ..	11	13	4			
217·7·8	cubic yards excavation in rock; "Star Hotel," at 9s. ...	97	15	6			
123·7·10	ditto ditto ditto at 8s. 9d. ... ..	53	18	9			
73·1·8	cubic yards excavation in soil, "Star Hotel," at 4s. ...	14	12	3			
63·7·0	ditto ditto junction; at 4s. 9d. ... ..	15	0	6			
16·17·10	ditto ditto concrete under sewer, at 4s. 9d. ... ..	3	19	1			
57·0·0	cubic yards excavation in soil, raising gas and water mains, at 4s. ... ..	11	8	0			
25·26·2	lineal feet tunnelling from Fort to Macquarie-place, in rock, at £5 ... ..	12630	16	8			
38·118·0	rods brickwork in cement, at £42 ... ..	1614	4	5			
16·17·10	cubic yds. concrete, for Main Sewer and junctions, at 15s. ... ..	12	9	11			
17·13·6	cubic yds. of asphalt on crown of junctions, at 35s.	30	12	6			
Carried forward...		£14,701	9	10			

## ABSTRACT—Continued.

		£	s.	d.	£	s.	d.
Brought forward ...		14701	9	10			
<i>Main Sewer—Continued.</i>							
1446-0	cubic yards lead, $\frac{1}{2}$ m., at 3s. ...	216	18	0			
150 $\frac{1}{2}$	ditto lead, $1\frac{1}{4}$ m., at 6s. ...	45	1	6			
28	ditto lead, $1\frac{1}{4}$ m., at 6s. 9d. ...	9	9	0			
2	manholes, each 83s. ...	8	6	0			
	fixing 1 plate, at £2 ...	2	0	0			
15-13-0	cubic yards excavation in soil, Fort Macquarie, 6 feet deep, at 4s. ...	3	2	0			
8-0-0	cubic yards excavation in soil, Macquarie-street, manhole, 6 feet deep, at 4s. ...	1	12	0			
20-11-8	cubic yards excavation in soil, Castlereagh-street junction, 6 feet deep, at 4s. ...	4	1	7			
9-22-2	cubic yards excavation in rock, Castlereagh-street junction, at 8s. 9d. ...	4	5	11			
8	cast-iron junction pipes, at 45s. 6d. ...	18	4	0			
8	holes excavated for ditto in rock, at 8s. ...	3	4	0			
19-26-0	cubic yards excavation in rock, Elizabeth-street manhole, 12 feet deep, at 8s. 9d. ...	8	14	8			
1,575-7 $\frac{1}{2}$	superficial feet rendering ...	59	1	8			
					15,085	10	2
Less £100, to be deducted for dressing near Water Police Office .....						100	0 0
					14,985	10	2
<i>Macquarie-street Sewer. (3-6 x 2-4.)</i>							
30-15	cubic yards excavation in soil, for outlet, 6 feet deep, at 4s. ...	6	2	2			
87-21	cubic yards excavation in rock, 12 feet deep, at 8s. 9d. ...	38	8	1			
42-76	cubic yards excavation in rock, 10 feet deep, at 8s. 6d. ...	17	19	4			
87-21	cubic yards excavation in soil, 6 feet deep, at 4s. ...	17	11	1			
42-76	ditto ditto ditto at 4s. ...	8	9	2			
2,743-0	lineal feet tunnelling in rock, at £4 ...	10972	0	0			
80-0	ditto 12-inch pipes for outlet, at 4d. ...	1	6	8			
91-223-8	rods brickwork in cement, at £42 ...	3856	10	8			
2	manholes, 11-6 feet deep, at £5 14s. 6d. ...	11	9	0			
2	ditto plates fixed, at £2 ...	4	0	0			
13	lineal feet of curbing to manhole No. 2, at 1s. ...	0	13	0			
1542-0	cubic yards lead, $\frac{1}{2}$ m., at 3s. ...	231	6	0			
257-18	ditto $\frac{1}{2}$ m., at 4s. 6d. ...	57	19	6			
8-12	cubic yards excavation in rock, for manhole, 10 feet deep, at 9s. ...	3	16	0			
16-24	ditto excavation in soil, for manhole, 8 feet deep, at 4s. 3d. ...	3	12	3			
57	12-inch collars, at 4s. ...	11	8	0			
					15,242	10	11
<i>Bridge-street. (3-6 x 2-4.)</i>							
389-25-3	cubic yards excavation in soil, 10 feet deep, at 4s. 6d. ...	87	14	8			
68-0-8	cubic yards excavation in rock, 10 feet deep, at 8s. 6d. ...	28	18	3			
42-0	lineal feet of tunnelling, at £4 ...	168	0	0			
9-50-6	rods brickwork in cement, at £42 ...	385	15	11			
5	clay junctions, at 13s. ...	3	5	0			
195-25	cubic yards lead, $\frac{1}{2}$ m., at 3s. ...	29	7	9			
5	holes excavated for junctions in soil, at 4s. ...	1	0	0			
					704	1	7
<i>Castlereagh-street Sewer. (3-6 x 2-4.)</i>							
1,237-5	lineal feet tunnelling in rock, at £4 ...	4,949	13	4			
141-8	" " in soil, £1 18s. ...	269	3	4			
10-203-8	rods brickwork in cement, at £42 ...	451	8	11			
13	cast-iron junction pipes, at £2 5s. 6d. ...	29	11	6			
1	manhole, 8 feet 3 inches deep, at £4 5s. 3d. ...	4	5	3			
1	" plate fixed, at £2 ...	2	0	0			
5-4	cubic yards excavation in rock for manhole, 10 feet deep, at 8s. 6d. ...	2	3	9			
2-14	cubic yards excavation in soil for manhole, 6 feet deep, at 4s. ...	0	10	1			
241-10	cubic yards lead, 1 m., at 5s. 6d. ...	66	7	6			
					5,775	3	8
Carried forward ...					£	30,932	2 8



## ABSTRACT—Continued.

		£	s.	d.	£	s.	d.
Brought forward		5,775	3	8	30,932	2	8
35-12-9	cubic yards excavation in rock for junction with with main sewer, 15 feet deep, at 9s.	15	19	3			
15-2-7	cubic yards excavation in soil for junction with main sewer, 6 feet deep, at 4s.	3	1	10			
13	holes excavated for junction pipes, $\frac{3}{8}$ rock and $\frac{1}{8}$ soil, at 6s. 8d.	4	6	8	5,798	11	5
<i>Phillip-street Sewer.</i> (3-6 × 2-4.)							
2,292-7	lineal feet tunnelling in rock, at £4	9,170	6	8			
229-5	cubic yards excavation in rock, 15 feet deep, at 9s.	103	2	8			
229-5	" " " soil, 8 feet deep, at 4s. 3d.	48	14	0			
63-263-0	rods brickwork in cement, at £42	2,686	12	2			
61	cast-iron junctions, at £2 5s. 6d.	138	15	6			
1,336 $\frac{1}{2}$	cubic yards lead, $\frac{1}{2}$ m., at 3s.	200	8	9			
28 $\frac{1}{4}$	" " " $1\frac{1}{4}$ " at 6s.	8	12	6			
1	manhole, 6 feet 6 inches deep	3	9	6			
1	" 8 feet deep	4	3	0			
1	" 11 feet deep	5	10	0			
1	" 6 feet 6 inches	3	9	6			
4	" plates fixed, at £2	8	0	0			
15-16-10	excavation in rock for manhole, 10 feet deep, 8s. 6d.	6	12	9			
15-16-10	cubic yards excavation in soil for manhole, 6 feet deep, at 4s.	3	2	6			
21-12-0	cubic yards excavation in rock, Bridge-street junc- tion, 12 feet deep, at 8s. 9d.	9	7	6			
21-12-0	cubic yards excavation in soil, Bridge-street junc- tion, 6 feet deep, at 4s.	4	5	9			
61	holes for junction pipes, rock, at 8s.	24	8	0	12,429	0	9
<i>Pitt-street Sewer.</i> (4-6 × 3-0.)							
953-22	cubic yards excavation in rock from Bridge to Hunter-street, 12 feet deep, at 8s. 9d.	417	5	10			
953-22	cubic yards excavation in soil from Bridge to Hunter-street, 6 feet deep, at 4s.	190	15	3			
558-24	cubic yards excavation in soil, outlet to Tank Stream and diversion to Spring-street, 12 feet deep, at 4s. 9d.	132	14	8			
75-1	cubic yards excavation in rock, Hunter-street junction, 12 feet deep, at 8s. 9d.	32	16	7			
75-1	cubic yards excavation in soil, Hunter-street junc- tion, 6 feet deep, at 4s.	15	0	2			
48-2	cubic yards excavation in rock for branches, Hunter- street, 12 feet deep, at 8s. 9d.	21	0	7			
48-2	cubic yards excavation in soil for branches, Hunter- street, 6 feet deep at 4s.	9	12	3			
399-4	{ cub. yds. excavation in } junctions of King, { rock, 15 feet deep, at 9s. } Market, and Park { 399-4 { cub. yds. excavation in } streets ... { soil, 8 feet deep, at 4s. 3d. }	179	12	4			
30-7	{ cubic yards excavation, } 5 manholes, av. depth { 8 feet deep, at 4s. 3d. } 12 feet, $\frac{1}{8}$ rock and { 15-3 { cubic yards excavation, } $\frac{3}{8}$ soil ... { 12 feet deep, at 8s. 9d. }	6	8	7			
2,771-2	lineal feet tunnelling in rock, at £4 10s.	12,470	5	0			
325-0	" " in soil, at £2	650	0	0			
78-4	" " in rock, for King, Market, and Park streets' branches, at £3 10s.	274	3	4			
13-4	lineal feet tunnelling in soil, for King, Market, and Park streets' branches, at £1 16s.	24	0	0			
200-225-5	rods brickwork in cement, at £42	8,434	16	1			
234	lineal feet 12-inch pipes laid for outlet to Tank Stream, &c., at 4d.	3	18	0			
12	lineal feet 9-inch pipes in cement, Spring-street, 6d.	0	6	0			
6	manholes, average depth 11 feet, at £5 10s.	33	0	0			
8	Iron plates fixed, at £2	16	0	0			
11	clay junction pipes fixed, at 13s.	7	3	0			
88	iron junction pipes, 12-inch, at 45s. 6d.	200	4	0			
7-2-1	cubic yards of asphalt, at 35s.	13	12	2			
3914 $\frac{1}{2}$	" lead, $\frac{1}{2}$ m., at 4s. 6d.	880	15	3			
99	holes excavated in rock for junction, at 8s.	39	12	0	24,144	9	7
Carried forward		£	73,304	4	5		

ABSTRACT

## ABSTRACT—Continued.

		£	s.	d.	£	s.	d.
Brought forward		.....			73,304	4	5
<i>Elizabeth-street Sewer. (3·6 × 2·4.)</i>							
3170·11	lineal feet tunnelling in rock, at £4	12,683	13	4			
387·4	" " soil, at 38s.	735	18	8			
613·3·4	cubic yards excavation in rock, 10 feet deep, at 8s. 6d.	260	11	6			
613·3·5	" " soil, 6 feet deep, at 4s.	122	12	6			
9·7	" " in manhole No. 1, 10 feet deep, at 4s. 6d.	2	1	8			
41·83·4	rods brickwork in cement, at £42	1,734	17	4			
1	manhole, 14 feet deep	6	17	0			
1	" 9 "	4	12	0			
1	" 6·6 "	3	9	6			
12	iron pipes for junctions, at 45s. 6d.	27	6	0			
3	manhole plates fixed, at £2	6	0	0			
158	cubic yards lead, $\frac{1}{4}$ m. at 3s.	23	14	0			
1,467	" " $\frac{1}{2}$ " at 4s. 6d.	330	1	6			
108 $\frac{1}{4}$	" " 1 " at 5s. 6d.	29	15	4			
9	clay collars for junctions, 12-inch, at 4s	1	16	0			
12	holes for junctions in rock, at 8s	4	16	0			
					15,978	2	4
Amount advanced on account of rendering in Pitt, Castlereagh, Elizabeth, Phillip, Macquarie, and Bridge Streets Sewers, such rendering being found incomplete, and therefore not included in the above measurements					1,504	11	2
					£ 90,786	17	11

Fair Copy of Memorandum Book,

Examined—JAS. COWLISHAW.  
17 July, 1856.

W. TOMS.

1856.

NEW SOUTH WALES.

## HENRY C. MAIS.

(LATE ASSISTANT CITY ENGINEER.)

*Ordered by the Legislative Assembly to be Printed, 26 November, 1856.*

RETURN to an *Address* from the Honorable the Legislative Assembly, dated 8 November, 1856, requesting that His Excellency the Governor General would be pleased to cause to be laid upon the Table:—

- “ (1.) A Return shewing the circumstances under which Mr. Henry C. Mais ceased to fill the office of Assistant City Engineer in the Department of the City Commissioners, the date when he ceased to fill that office, and the correspondence (if any) between him and the City Commissioners in reference to his so ceasing to hold said office.
- “ (2.) A Return shewing the date of the appointment of the said Mr. Mais to office in the Department of the Railway Commissioners, the nature of such office, and the Salary attached thereto.
- “ (3.) Copies of the recommendations, certificates, or testimonials (if any) which were submitted by Mr. Mais on his behalf to the Railway Commissioners before his appointment to office under them, and if there are no written recommendations, then the nature of any verbal ones which may have been given in favour of Mr. Mais to the Railway Commissioners, together with the names of the person or persons giving the same.”

## SCHEDULE.

- |  |   |
|--|---|
| 1. Secretary to City Commissioners to Colonial Secretary, 18 November, 1856, furnishing information respecting the removal of Mr. Mais from the office of Assistant City Engineer (with four Enclosures) .....           | 2 |
| 2. The Chief Commissioner for Railways to the Secretary for Lands and Public Works, 20 November, 1856, furnishing information relative to Mr. Mais' employment by the Railway Commissioners (with nine Enclosures) ..... | 3 |

1856.

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**HENRY C. MAIS.**


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No. 1.

THE SECRETARY TO THE CITY COMMISSIONERS to THE COLONIAL SECRETARY.

No. 56-871.

*City Commissioners' Office,  
Sydney, 18 November, 1856.*

SIR,

In reply to your letter of the 12th instant, requesting to be furnished with certain information, to be laid before the Legislative Assembly, with reference to the removal of Mr. H. C. Mais from the office of Assistant City Engineer, I have the honor, by direction of the City Commissioners, to state, that it was originally the intention of the Commissioners to dispense with the services of Mr. Mais at the period when Mr. Rider, the City Engineer, was dismissed; but they delayed carrying their intention into effect, as it was the opinion of the newly appointed City Engineer that it would be better to retain Mr. Mais in the service for a short time, as he had been engaged in superintending the sewerage works from the commencement, and could afford the Engineer such information as might be required, with regard to those works, and the accounts connected with them.

2. The enclosed copies of correspondence will shew that Mr. Bell, acting on the suggestion of the Commissioners, gave Mr. Mais notice on the 30th April last that his services would be no longer required,—that Mr. Mais requested leave to resign, but to remain in the service of the Commissioners until the 31st of July, and that the resignation was accepted for the 31st of May, the City Engineer being instructed to make such arrangements as might seem desirable with reference to Mr. Mais remaining in office as draughtsman, beyond the period of his ceasing to hold the appointment of Assistant Engineer.

3. Mr. Mais finally left the service on the 7th of June.

I have, &c.,  
CHAS. H. WOOLCOTT,  
Secretary.

THE HONORABLE  
THE COLONIAL SECRETARY.  
&c., &c., &c.

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[Enclosure 1 in No. 1.]

*City Commissioners' Office,  
Engineer's Department,  
Sydney, 6 May, 1856.*

GENTLEMEN,

I have the honor to report to you, that in consequence of the errors which I have discovered, and which have frequently occurred, in the work which has been entrusted to Mr. Mais to perform, I informed him on the 30th of April his services were no longer required, and suggested to him that it might be more agreeable to himself, and conducive to his future interests, to send in his resignation, to avoid the necessity of the notice which I had given him verbally being conveyed to him in writing. He thanked me for the suggestion, and promised to give in his resignation; but it has not yet been received.

I have, &c.,  
E. BELL,  
City Engineer.

THE COMMISSIONERS FOR  
THE CITY OF SYDNEY.

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[Enclosure

[Enclosure 2 in No. 1.]

City Commission,  
Engineer's Office,  
7 May, 1856.

GENTLEMEN,

Circumstances, over which I have no control, compel me to resign the appointment that I now have the honor to hold under you, and would wish, if not inconvenient to the department, that my services should terminate on the 31st of July, next ensuing.

I have, &c.,  
H. C. MAIS.

THE COMMISSIONERS FOR  
THE CITY OF SYDNEY.

MEMO. of City Engineer on letter from Mr. H. C. Mais resigning his appointment.

The notice given herein by Mr. Mais is only that which a faithful and correct officer might be expected to give and receive.

In this case any notice must be held as an indulgence. I may remark that I can employ Mr. Mais usefully in the capacity of a draughtsman for some few weeks, perhaps longer; probably during the term of his notice, if there be no objection.

27 May, 1856.

E. BELL,  
City Engineer.

[Enclosure 3 in No. 1.]

City Commissioners' Office,  
Sydney, 28 May, 1856.

SIR,

Referring to your letter of the 7th instant, intimating your intention of resigning your appointment as Assistant Engineer on the 31st of July next, I have the honor to inform you that the City Commissioners have accepted your resignation, and that your present appointment will cease on the 31st instant.

With respect to your remaining in the service of the Commissioners until the period mentioned by you, I beg to refer you to the City Engineer, who has received instructions to make such arrangements for your employment as may seem desirable.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

MR. H. C. MAIS,  
&c., &c., &c.

No. 2.

THE CHIEF COMMISSIONER FOR RAILWAYS to THE SECRETARY FOR LANDS AND PUBLIC WORKS.

Railway Office,  
Sydney, 20 November, 1856.

SIR,

Herewith I do myself the honor to forward Returns as per margin, relative to the employment of Mr. Mais, called for by your letter No. 9. Returns 1 and 2 enclosed.

2. At the time of Mr. Mais' employment under the circumstances detailed in Return No. 1, verbal inquiries were made of the Chief City Commissioner, Mr. Commissioner Darvall, and Mr. Bell, the City Engineer, with reference to his employment in that department, the replies to which were quite satisfactory.

3. The testimonials, of which the enclosures accompanying the Return No. 2 are copies, were handed in by Mr. Mais on his making application for permanent or further employment.

I have, &c.,

GOTHER K. MANN,  
Chief Commissioner.

THE HONORABLE  
THE SECRETARY FOR LANDS AND PUBLIC WORKS.

1856.11.21

RETURN

## RETURN No. 1.—EMPLOYMENT OF MR. HENRY C. MAIS.

Name.	Rate of Salary.	Period of Service.		Nature of employment.	Remarks.
		From	To.		
Henry C. Mais	£400 per annum	1856. June 9	1856. Oct. 31	Temporary Mechanical Engineer on Special Service at the Station Workshop.	Mr. Mais has not held Office under the Commission as implied. The Engineer of the Line was authorized to engage, temporarily, the services of a Mechanical Engineer, at a salary not exceeding the rate of £400 per annum, for special service; and on these terms Mr. Mais was employed, his services ending on the completion of the work.

GOTHER K. MANN,  
Chief Commissioner.

## RETURN No. 2.—TESTIMONIALS OF MR. MAIS, IN POSSESSION OF RAILWAY COMMISSIONERS.

No.	DATE.	REMARKS.
1	1847. March ...	Testimonial from Archibald Sturrock, of the Swindon Locomotive Department, Great Western Railway.
2	1849. November 16...	” from C. H. Capper, of the Broad-street Foundry Works, Birmingham.
3	1850. April 5.....	” from W. M. Peniston, Wilts, Somerset and Weymouth Railway, Yetminster.
4	1851. May 15.....	”
5	May 5.....	” from John Exley of St. John's College, Cambridge.
6	1856. February 9...	” from Charles Kemp, President of the Sydney Railway Company.
7	August 24...	” from J. L. Travers, of Kirribilli Point, (by whom Mr. Mais was employed at Brisbane Water.)

GOTHER K. MANN,  
Chief Commissioner.

[Enclosure 1 in No. 2.]

Swindon Works,  
March, 1847.

SIR,

I do myself the pleasure of writing these few lines to you, to certify that Mr. Mais has been employed here in superintending the manufacture of Locomotive Engines, and that he has conducted his operations in a most successful manner, and if you are in want of a superintendent or assistant I can confidently recommend him to you.

I am, &c.,  
ARCHD. STURROCK.

W. PENISTON, ESQ.,  
W. S. & W. R.,  
Somerset.

[Enclosure

HENRY C. MAIS.

5

[Enclosure 2 in No. 2.]

Birmingham, Broad-street Foundry,  
16 November, 1849.

DEAR SIR,

You ask me to send you a testimonial in favour of Mr. Henry Mais, during the time he has been with me in Birmingham.

You must be aware that previous to his arriving here, he had been many years in the Railways, and had obtained much information both in office and out works: during the time he has been here, he has chiefly been engaged in making a model of a Land and Marine Engine, which he has done with credit to himself, and gained the best practical information on the mechanical parts of a Steam Engine, and I should have great pleasure in recommending him to any Engineer who is in want of a practical, steady, and honorable young man.

Should your friends require any further information, please refer them to me, as I shall have the greatest pleasure in doing any thing in my power to forward his views.

I am, &amp;c.,

C. H. CAPPER.

[Enclosure 3 in No. 2.]

Wilts, Somerset, and Weymouth Railway,  
Engineer's Office, Yetminster,  
Sherbone, 5 April, 1850.

MY DEAR MAIS,

It will afford me much pleasure to be able to forward your views in seeking for the appointment at the Hull Docks. I should consider the opportunity you had of obtaining practical information from the works under my charge, whilst you were with me, would fully qualify you to undertake the duties of the appointment; and I shall willingly bear testimony at all times to the assiduity and attention displayed by you in your profession.

Believe me, &amp;c.,

W. M. PENISTON.

H. C. MAIS, Esq.,  
Redlands, Bristol.

[Enclosure 4 in No. 2.]

Wilts, Somerset, and Weymouth Railway  
Engineer's Office, Yetminster,  
15 May, 1851.

MY DEAR MAIS,

I believe you have the necessary papers to prove your having regularly served your time, and with credit with me, and regret you should not have provided yourself with the certificate of your employment during that time, and have now much pleasure in testifying to the assistance you have afforded me in preparing the necessary plans, sections, property plans, and working drawings for this line of Railway, and sincerely trust that you will now have an opportunity of applying profitably the experience you obtained on these works.

Believe me, &amp;c.,

W. M. PENISTON.

[Enclosure 5 in No. 2.]

Henry Mais, Esq., was for some time a student in my school, where he studied both classics and mathematics to considerable extent. At an early age he made himself acquainted with the elementary portions of geometry and algebra, and afterwards read trigonometry, the conic sections, and differential calculus, as also the application of mathematics to surveying, mechanics, and other branches of physical science. On leaving school, he was articled to Mr. Peniston, an Engineer of experience and extensive practice on the Great Western Railroad. He here had opportunity for gaining information on nearly every point connected with the practical engineering, of which I have reason to think he diligently availed himself.

JOHN EXLEY, A. M., H. P. S.,  
St. John's College, Cambridge.

Cotham, 5 May, 1851.

[Enclosure No. 6 in No. 2.]

Mr. Mais resigned his appointment as Engineer of the Sydney Railway Company in March, 1852, giving three months' notice, in terms of his agreement with the Company. His resignation was accepted by the Directors, who were anxious that Mr. Wallace, then daily expected from England, should have, as far as possible, the appointment of his own assistants. There was no complaint, professional or personal, against Mr. Mais.

CHARLES KEMP,

President (at the time) of the Company.

Macquarie-street,  
9 February, 1856.

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[Enclosure 7 in No. 2.]

*Kirribilli Point,*  
24 August, 1853.

DEAR SIR,

I have pleasure in stating that you were employed by me at Brisbane Water to erect and manage the works then in the building of a steam saw mill, and that, as Engineer, I found you efficient and up to your work, which was substantially and well done; and I have, since you left, had that opinion confirmed by many who have inspected the mill. \* \* \*

Your integrity was never doubted in any way by me, and in that respect I had, and still entertain, every confidence; and as you requested, I beg to say that I have never spoken otherwise of you.

I am, &c.,  
J. L. TRAVERS.

MR. H. C. MAIS,  
Sydney.

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1856.

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NEW SOUTH WALES.

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CITY SEWERAGE WORKS.

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*Ordered by the Legislative Assembly to be Printed, 20 August, 1856.*

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RETURN to an *Order* of the Honorable the Legislative Assembly, dated  
8 August, 1856, for :—

“ Copies of the several Certificates of Works executed by, and  
“ and of Payments made to, the Contractor for the Sydney  
“ Sewerage Works, from 31st March to the present date,  
“ being the continuation of those contained in the Appendix  
“ to the Evidence annexed to the Final Report from the ‘ Select  
“ Committee on the City Commissioners’ Department,’ which  
“ was ordered by the Council to be Printed on 13th Decem-  
“ ber, 1855.”

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## CITY SEWERAGE WORKS.

THE CITY COMMISSIONERS to THE COLONIAL SECRETARY.

*City Commissioners' Office,  
Sydney, 15 August, 1856.*

SIR,

In accordance with the request contained in your letter of the 11th instant, I have now the honor, by direction of the City Commissioners, to forward herewith, for the purpose of being laid before the Legislative Assembly, copies of the Certificates of Works executed by the Contractor for the Sydney Sewerage Works, from the 31st March last to the 5th instant, and a certificate of the payments made on account thereof.

2. I am directed to state, however, in order to prevent any misunderstanding on the part of the Contractor, that the measurements herewith transmitted are not certificates to Mr. Randle, but private memoranda for the information of the Commissioners, not binding any further than they are found to be correct, and subject to revision at each subsequent measurement. The only certificates, as far as Mr. Randle is concerned, are those furnished to the City Treasurer, authorizing fortnightly advances for work performed, without specifying quantities.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

THE HONORABLE

THE COLONIAL SECRETARY,  
&c., &c., &c.

[Enclosure in foregoing.]

### SYDNEY SEWERAGE WORKS.

MEMORANDUM OF WORK EXECUTED BY MR. WM. RANDLE.

*From 31 March to 14 April, 1856.*

No. 21.

*Main Sewer.*—39:11:9 cubic yards open cutting in rock, 9s. 6d. 96:2 lineal feet driving in rock, £4 10s. 16:5:6 cubic yards open cutting in soil, 4s. 3:122 rods 14-inch brickwork, £42.

*Elizabeth-street.*—62:10:1 cubic yards open cutting in rock, 9s. 6d. 49:6 lineal feet driving in rock, £3 10s. 12:4:1 cubic yards open cutting in soil, 4s.

#### ABSTRACT.

	PRICE.			£	s.	d.
	£	s.	d.			
<i>Main Sewer.</i>						
96:2 lineal feet tunnelling (rock) ... ..	4	10	0	432	15	0
3:122 rods brickwork, 14-inch .. ..	42	0	0	144	16	9
59:10:9 less } 19:26:0 } for manhole Elizabeth-st., paid 31 Dec., 1855.						
39:11:9 cubic yards open cutting for junction with Elizabeth-street (rock) 20 feet depth ... ..	0	9	6	18	14	7
16:5:6 ditto ditto (soil) 6 feet ... ..	0	4	0	3	4	10
<i>Elizabeth-street.</i> (3ft. 6in. by 2ft. 4in.)						
49:6 lineal feet tunnelling (rock) ... ..	3	10	0	173	5	0
62:10:1 cubic yards open cutting branch (junction) with Main Sewer (rock), 20 feet deep... ..	0	9	6	29	12	6
12:4:1 ditto ditto (soil), 6 feet deep ... ..	0	4	0	2	8	7
				£804	17	3
Less 10 per cent. ... ..				80	8	0
				£724	9	3

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW,  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

*From*

CITY SEWERAGE WORKS.

From 14 to 28 April, 1856.

No. 22.

*Main Sewer.*—64:2 lineal feet driving in rock, £4 10s. 9:173:10 rods 14-inch brickwork, £42.

ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i>						
64:2 lineal feet tunnelling (rock) ... ..	4	10	0	288	15	0
9:173:10 rods brickwork ... ..	42	0	0	404	16	10
				£693	11	10
Less 10 per cent. ... ..				69	7	0
				£624	4	10

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW,  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

From 28 April to 12 May, 1856.

No. 23.

*Main Sewer.*—21:197 rods 14-inch brickwork, £42.  
*Elizabeth-street Junction.*—Manhole, 8 feet depth, £4 3s.

ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i>						
21:197 rods brickwork, 14-inch ... ..	42	0	0	912	8	4
Manhole, Elizabeth-street Junction, 8 feet depth...	4	3	0	4	3	0
				916	11	4
Less 10 per cent. ... ..				91	12	0
				824	19	4

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW,  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

From 12 to 26 May, 1856.

No. 24.

*Macquarie-street.*—28:17:6 cubic yards open cutting in rock, 9s. 6d. 12:6 lineal feet driving in rock, £4. 17:17 cubic yards open cutting in soil, 4s.

ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Macquarie-street.</i>						
12:6 lineal feet tunnelling (rock) ... ..	4	0	0	50	0	0
17:17 cubic yards open cutting (soil,) 6 feet depth ...	0	4	0	3	10	6
28:17:6 ditto ditto (rock,) 20 ditto ...	0	9	6	13	12	2
				£67	2	8
Less 10 per cent. ... ..				6	14	0
				£60	8	8

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW,  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

From 26 May to 9 June, 1856.

No. 25.

*Main Sewer.*—15:3 lineal feet driving in rock, £4 10s. 10 rods 5 perches 14-inch brickwork, £42.

*Chase at Fort Macquarie.*—11:<sup>1</sup>/<sub>10</sub> cubic yards open cutting in rock, 8s. 3d. 67 feet 14-inch brickwork, £42.

*Macquarie-street Sewer.*—21:7 lineal feet driving in rock, £3 10s.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
15½ lineal feet of tunnelling (rock) ... ..	4	10	0	68	12	6
10:5 rods reduced brickwork in cement ... ..	42	0	0	420	15	5
11: <sup>1</sup> / <sub>10</sub> cubic yards of open cutting (rock) for deep Chase at Fort Macquarie ... ..	0	8	3	4	11	7
67 feet reduced brickwork in cement, in walls for pipe at Fort Macquarie ... ..	42	0	0	10	6	10
			per rod.			
<i>Macquarie-street Sewer.</i> 21:7 lineal feet of tunnelling (rock) ... ..	3	10	0	75	10	10
				£579	17	2
Less 10 per cent. ... ..				57	19	9
				£521	17	5

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW.  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.

8 August, 1856.

From 9 to 23 June, 1856.

No. 26.

*Main Sewer.*—10 rods 98 feet 14-inch brickwork, £42.

*Macquarie-street Sewer.*—14 lineal feet driving in rock, £3 10s.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i> 10:98 rods reduced brickwork in cement ... ..	42	0	0	435	2	8
<i>Macquarie-street Sewer.</i> 14 lineal feet of driving (rock) ... ..	3	10	0	49	0	0
				£484	2	8
Less 10 per cent. ... ..				48	8	0
				£435	14	8

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW.  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.

8 August, 1856.

From 23 June to 4 July, 1856.

No. 27.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i> 63:13:5 cubic yards excavation (rock,) Fort Macquarie, 6 feet depth ... ..	0	8	0	25	8	0
15:13:0 ditto ditto (soil,) ditto ... ..	0	4	0	3	2	0
398:26:8 ditto ditto (rock,) at Quarry, 15 feet depth ... ..	0	9	0	179	10	11
24:18:0 ditto ditto (rock,) manhole, Macquarie-street ... ..	0	10	6	12	19	0
10:24:0 ditto ditto (soil) ... ..	0	6	6	3	10	9
217:7:8 ditto ditto (rock,) "Star Hotel" ... ..	0	9	0	97	15	6
123:7:10 ditto ditto (rock,) ditto ... ..	0	8	9	53	18	9
73:1:8 ditto ditto (soil,) ditto, 12 feet depth ... ..	0	4	9	17	7	1
63:7:0 ditto ditto for junction, Pitt-street ... ..	0	4	9	15	0	6
16:17:10 ditto ditto (soil,) for concrete ... ..	0	4	9	3	19	1
Carried forward ... ..	£			412	11	7

ABSTRACT.

## CITY SEWERAGE WORKS.

5

## ABSTRACT—Continued.

	PRICE.			£	s.	d.
	£	s.	d.			
<i>Main Sewer—Continued.</i>						
Brought forward ... ..				412	11	7
16:5:0 cubic yards excavation (soil) for Elizabeth-street junction ... ..	0	4	9	3	16	10
39:3:0 ditto ditto (rock) ditto ... ..	0	9	6	18	11	6
20:11:8 ditto ditto (soil) Castlereagh-street junction, 12 feet depth ... ..	0	4	9	4	17	0
9:22:2 ditto ditto (rock) ditto ... ..	0	8	9	4	5	11
19:26:0 ditto ditto (rock) Elizabeth-street manhole, 12 feet depth ... ..	0	8	9	8	14	8
57:0:0 ditto ditto raising gas and water mains ... ..	0	4	0	11	8	0
2710:10 lineal feet of tunnelling from Fort to Macquarie-place (rock):—						
2526 feet 2 inches ... ..	5	0	0	12,630	16	8
184 feet 8 inches (not bricked) ... ..	4	10	0	831	0	0
106:81 rods reduced Brickwork in cement ... ..	42	0	0	4,464	10	2
16:17:10 cubic yards concrete for main sewer and junctions	0	15	0	12	9	11
17:13:6 ditto ditto asphalt on crown of junction ... ..	1	15	0	30	12	6
1454½ cubic yards lead ½ m. } to end of 13½ inch	0	3	0	218	2	9
150½ ditto ditto 1½ m. } brick-work. {	0	6	0	45	1	6
28 ditto ditto 1½ m. }	0	6	9	9	9	0
1 manhole, 8 feet deep ... ..				4	3	0
1 ditto 4½ feet deep ... ..				2	11	6
1 ditto 2 feet 2 inches deep ... ..				1	10	6
fixing 3 plates ... ..	2	0	0	6	0	0
8 cast iron junction pipes fixing ... ..	2	5	6	18	4	0
8 holes excavated for ditto (rock) ... ..	0	8	0	3	4	0
9667 superficial feet of rendering to commencement of chase	0	0	9	362	10	3
17:4 lineal feet tunnelling 3ft. 6in. sewer (rock) junctions Phillip and Macquarie Streets ... ..	4	0	0	69	6	8
1:55 reduced brickwork in cement at Fort, taken up ...	30	0	0	36	1	4
				19,209	19	3
<i>Pitt-street Sewer.</i>						
953:22 excavation (rock) from Bridge to Hunter-street, 12 feet depth ... ..	0	8	9	417	5	10
953:22 ditto (soil) ditto ditto, 12 feet depth ... ..	0	4	9	226	10	7
558:24 ditto (soil) outlet to Tank-stream, 12 feet depth	0	4	9	132	14	8
75:1 ditto (rock) Hunter-street junction, 12 feet depth	0	8	9	32	16	7
75:1 ditto (soil) ditto ditto, 12 feet depth ... ..	0	4	9	17	16	5
48:2 ditto (rock) branches, Hunter-street, 12 feet depth	0	8	9	21	0	7
48:2 ditto (soil) ditto ditto, 12 feet depth ... ..	0	4	9	11	8	4
399:4 ditto (rock) junction of King, Market, and Park Streets, 15 feet depth ... ..	0	9	0	179	12	4
399:4 ditto (soil) ditto ditto, 15 feet depth ... ..	0	5	0	99	15	9
30:7 ditto (soil) } 5 manholes ditto, { 12 feet depth	0	4	9	7	3	8
15:3 ditto (rock) } ½ rock ¾ soil. { 12 feet depth	0	8	9	6	12	2
2790:2 lineal feet tunnelling (rock) ... ..	4	10	0	12,555	15	0
315:4 ditto ditto (soil) ... ..	2	0	0	630	13	4
78:4 ditto ditto (rock) for King, Park, and Market-street junctions ... ..	3	10	0	274	3	4
13:4 ditto ditto (soil) for ditto ditto... ..	1	16	0	24	0	0
202:251:5 rods brickwork in cement ... ..	42	0	0	8,522	16	5
12 lineal feet of 9-inch pipes in cement, Spring-street.	0	0	6	0	6	0
234' ditto 12-inch ditto for outlet to Tank Stream ...	0	0	4	3	18	0
6 manholes, average depth 11 feet ... ..	5	10	0	33	0	0
8 iron plates, fixed ... ..	2	0	0	16	0	0
7:21 cubic yards asphalt ... ..	1	15	0	13	12	2
3924:10 ditto lead; ½ m. ... ..	0	4	6	882	19	8
11 clay junction pipes, 12-inch, fixed... ..	0	13	0	7	3	0
88 iron junction pipes, ditto ditto... ..	2	5	6	200	4	0
99 holes excavated in rock for junctions ... ..	0	8	0	39	12	0
				24,356	19	10
<i>Macquarie-street Sewer.</i>						
50 cubic yards excavation (soil) 15 feet depth ...	0	5	0	12	10	0
30:15 ditto ditto (soil) for outlet, 6 ft. depth	0	4	0	6	2	2
33½ ditto ditto (rock) 15 feet depth ... ..	0	9	0	15	3	0
87:21 ditto ditto (rock) 12 feet depth ... ..	0	8	9	38	8	1
87:21 ditto ditto (soil) 12 feet depth ... ..	0	4	9	20	16	10
84:15 ditto ditto (soil) 10 feet depth ... ..	0	4	6	19	0	6
2545:8 lineal feet tunnelling (rock) ... ..	4	0	0	10,182	13	4
Carried forward ... ..			£	10,294	13	11

## CITY SEWERAGE WORKS.

## ABSTRACT—Continued.

	PRICE.			£ s. d.		
	£	s.	d.	£	s.	d.
Brought forward...				10,294	13	11
<i>Macquarie-street Sewer—Continued.</i>						
252 lineal feet tunnelling (soil) ...	1	18	0	478	16	0
80 ditto 12-inch pipes for outlet ...	0	0	4	1	6	8
85:44 rods brickwork in cement ..	42	0	0	3,576	15	10
2 manholes, 11 feet 6 inches depth ...	5	14	6	11	9	0
2 manholes, £3 11s 9d., £3 18s. 6d. ...				7	10	3
Fixing 4 plates ...	2	0	0	8	0	0
13 lineal feet of curbing to manhole ...	0	1	0	0	13	0
12½ cubic yards excavation (soil) for 1 manhole, 12½ feet depth...	0	5	0	3	2	6
8 ditto ditto ditto ditto, 8 feet depth.	0	4	3	1	14	0
11:2:4 ditto ditto ditto ditto, 9 feet depth.	0	4	6	2	9	10
5:14:8 ditto ditto rock ditto, 12 feet depth.	0	8	9	2	8	6
56 12-inch collars ...	0	4	0	11	4	0
1 12-inch clay junction pipe, 8s.; hole for ditto (soil) 4s. ...				0	12	0
1423 cubic yards lead ¼ m. ...	0	3	0	213	9	0
237 ditto ditto ½ m. ...	0	4	6	53	6	6
10,444 superficial feet of rendering ...	0	0	9	391	13	0
				15,061	13	5
<i>Elizabeth-street Sewer.</i>						
49:5 lineal feet tunnelling (rock) ...	3	10	0	172	19	2
3170:11 ditto ditto (ditto) ...	4	0	0	12,683	13	4
387:4 ditto ditto (soil) ...	1	18	0	735	18	8
613:3:4 cubic yards excavation (rock) 10 feet depth ...	0	8	6	260	11	6
613:3:5 ditto ditto (soil) ...	0	4	6	137	19	0
9:7 ditto ditto in manhole, 10 feet depth...	0	4	6	2	1	8
12:4 ditto ditto (soil) at junction, 16 feet 10 inches depth ...	0	5	6	2	8	7
62:10 ditto ditto (rock) ditto ditto...	0	9	6	29	12	6
44:17:4 rods reduced brickwork in cement...	42	0	0	1,850	13	6
1 manhole, 14 feet depth ...				6	17	0
1 ditto 9 feet depth ...				4	12	0
1 ditto 5 feet 6 inches depth ...				3	0	6
12 iron pipes for junctions ...	2	5	6	27	6	0
3 manhole plates fixed ...	2	0	0	6	0	0
170 cubic yards lead ¼ m. } from crossing of	0	3	0	25	10	0
1467 ditto ditto ½ m. } Hunter-street to south	0	4	6	330	1	6
108½ ditto ditto 1 m. } end of street.	0	5	6	29	15	4
9 clay collars for junctions, 12-inch...	0	4	0	1	16	0
12 holes for junctions (rock) ...	0	8	0	4	16	0
				16,315	12	3
<i>Phillip-street Sewer.</i>						
2292:7 lineal feet tunnelling (rock) ...	4	0	0	9,170	6	8
11:3 ditto ditto, 3 feet sewer Bridge-street ...	3	10	0	39	7	6
229:5 cubic yards excavation, ditto, 15 feet depth ...	0	9	0	103	2	8
229:5 ditto (soil) 15 feet depth ...	0	5	0	57	5	11
67:163:9 rods brickwork in cement ...	42	0	0	2,839	5	8
61 cast-iron junctions ...	2	5	6	138	15	6
1373:19 cubic yards lead ¼ m. ...	0	3	0	206	1	1
28:21 ditto 1¼ m. ...	0	6	0	8	12	8
1 manhole, 6:6 deep ...				3	9	6
1 ditto, 8:0 ditto ...				4	3	0
1 ditto, 11:0 ,, ...				5	10	0
1 ditto, 6:6 ,, ...				3	9	6
4 plates fixed ...	2	0	0	8	0	0
15:16:10 cubic yards excavation (rock) for manhole, 10 feet depth ...	0	8	6	6	12	9
15:16:10 ditto ditto (soil) ditto, 10 feet depth ...	0	4	6	3	10	4
21:12 ditto ditto (rock) Bridge-st. Junction, 12ft. depth ...	0	8	9	9	7	6
21:12 ditto ditto (soil) ditto, 12 feet depth ...	0	4	9	5	1	10
61 holes for junction pipes in rock ...	0	8	0	24	8	0
10966 superficial feet of rendering ...	0	0	9	411	4	6
				13,047	14	7
Carried forward ...			£			

ABSTRACT

## CITY SEWERAGE WORKS.

7

## ABSTRACT—Continued.

	PRICE.			£	s.	d.
	£	s.	d.			
Brought forward	.....	.....	.....			
<i>Castlereagh-street.</i>						
1232:9 lineal feet tunnelling (rock)	...	...	...	4	0	0
213:4 ditto (soil)	...	...	...	1	18	0
11:203 rods brickwork in cement	...	...	...	42	0	0
13 cast-iron junction pipes	...	...	...	2	5	6
1 manhole plate fixed	...	...	...	2	0	0
5:4 cubic yards excavation (rock) for manhole 10 feet depth	...	...	...	0	8	6
2:14 ditto (soil) ditto	...	...	...	0	4	6
1 manhole, 8:3 feet depth	...	...	...	4	5	3
273½ cubic yards lead ¾ m.	...	...	...	0	5	0
119½ ditto ½ m.	...	...	...	0	4	6
293½ ditto ¼ m.	...	...	...	0	3	0
35:12:9 cubic yards excavation (rock) for junction Main Sewer, 15 feet depth	...	...	...	0	9	0
15:2:7 ditto in (soil) ditto	...	...	...	0	5	0
13 holes excavated for junctions of pipes, ½ soil, ½ rock	...	...	...	0	6	8
						6,031 10 1
<i>Bridge-street Sewer.</i>						
383½ cubic yards excavation in (soil) 10 feet depth	...	...	...	0	4	6
73:11 ditto (rock)	...	...	...	0	8	6
46:10 lineal feet of tunnelling	...	...	...	4	0	0
9:152 rods brickwork in cement	...	...	...	42	0	0
5 clay junctions	...	...	...	0	13	0
196½ cubic yards lead ¼ m., including portion next Main Sewer	...	...	...	0	3	0
5 holes excavated for junctions (soil)	...	...	...	0	4	0
						740 0 7
						94,761 0 7

The above is correct for work done since I have been here, and for that done previously, so far as I have been able to discover.

EDWARD BELL,  
City Engineer.

Advanced on account of rendering in Pitt, Castlereagh, Elizabeth, and Bridge streets Sewers, £701 13s. 8d., in former accounts.

The foregoing measurement shews the total work done, exclusive of amount for extras, to 4th July, to amount to ... £94,761 0 7.

The levels of part of the work done in Bridge-street were wrong, and are not yet corrected; the amount to withhold until it is corrected is 91 12 0

£94,669 8 7

There are 60 feet of driving for the Castlereagh-street Sewer under Park-street charged in the December account, and have been carried forward in this quarterly account; a great part is known to exist, but the exactness of the quantity is not certain, and can only be decided when the heading is cleared and foul air removed.

E. BELL,  
City Engineer.

Examined—G. JOBLING.  
E. CANNING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

From

From 4 to 21 July, 1856.

No. 28.

*Main Sewer.*—9:11 rods 9-inch brickwork, £42. 4,234½ feet of rendering, 9d.  
*Castlereagh-street.*—35:5 lineal feet driving in rock, £3 10s. 184:4 cubic yards open cutting in soil, 5s.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i>						
9:11 rods reduced brickwork in cement ... ..	42	0	0	379	13	11
4,234½ superficial feet rendering ... ..	0	0	9	158	15	11
<i>Castlereagh-street Sewer.</i>						
184:4 cubic yards excavation (soil) North of the No. 4 Shaft, 13 feet ... ..	0	5	0	46	0	9
33:5 of tunnelling (rock) ... ..	3	10	0	116	19	2
				£701	9	9
Less 10 per cent. ... ..				70	2	0
				£631	7	9

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW.  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

From 21 July, to 5 August, 1856.

No. 29.

*Main Sewer.*—6:13:6 rods 9-inch brickwork, £42. 1,502 feet of rendering, 9d.  
*Castlereagh-street.*—377½ cubic yards open cutting in rock, 9s. 104:2 lineal feet driving in rock, £3 10s. 34:8 cubic yards open cutting in soil, 5s.

## ABSTRACT.

	PRICE.					
	£	s.	d.	£	s.	d.
<i>Main Sewer.</i>						
6:13:6 rods reduced brickwork in cement ... ..	42	0	0	273	0	0
1,502 superficial feet rendering ... ..	0	0	9	56	6	6
<i>Castlereagh-street.</i>						
34:8 cubic yards excavation (soil) 15 feet deep ... ..	0	5	0	8	11	6
377:9 ditto ditto (rock) ... ..	0	9	0	169	16	0
104:2 lineal feet tunnelling (rock) ... ..	3	10	0	364	11	8
				£872	5	8
Less 10 per cent. ... ..				87	4	0
				£785	1	8

E. BELL,  
City Engineer.

Examined—JAS. COWLISHAW.  
G. JOBLING.

Fair Copy of Memorandum Book.—WM. TOMS.  
8 August, 1856.

ABSTRACT of Amounts paid to MR. WILLIAM RANDLE, on account of the CITY SEWERAGE WORKS, upon the certified accounts of the City Engineer, from the 31st March, to the 5th August, 1856:—

		£	s.	d.
April 18...	Amount of 25th Advance on Contract ... ..	724	9	3
May 16...	" 26th " ... ..	824	19	4
" 20...	" 27th " ... ..	624	4	10
June 13...	" 28th " ... ..	60	8	8
" "...	" 29th " ... ..	521	17	5
" 27...	" 30th " ... ..	435	14	8
July 25...	" 31st " ... ..	631	7	9
" "...	" 32nd " ... ..	2,500	0	0
		£6,323	1	11

I Certify, upon honor, that the above is a true and faithful account of all moneys paid to Mr. William Randle, between the above dates, and for the purpose therein specified.

EDW. LORD,  
City Treasurer.

August 12, 1856.



1857.

## NEW SOUTH WALES.

## SYDNEY SEWERAGE WORKS.

(CORRESPONDENCE RELATIVE TO BALANCES CLAIMED BY MR. RANDLE.)

*Ordered by the Legislative Assembly to be Printed, 18 February, 1857.*

RETURN to an *Order* of the Honorable the Legislative Assembly, dated  
3 February, 1857, for,—

“(1.) A Copy of all correspondence which may have taken place  
“between Mr. Randle and the City Commissioners, relative to  
“any balances claimed by the former on account of Works per-  
“formed by him in the construction of the City Sewers.”

“(2.) A copy of all correspondence which may have taken place  
“between Messrs. Want, Roxburgh, and Want, and the City  
“Commissioners, and also copies of all correspondence between  
“the latter gentleman and the City Solicitor, in reference to the  
“same subject.”

## SCHEDULE.

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## SYDNEY SEWERAGE WORKS.

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No. 1.

WILLIAM RANDLE, Esq., to THE CITY COMMISSIONERS.

*Bligh-street, Sydney,*  
12 October, 1855.

GENTLEMEN,

I am desired by Mr. Randle to apply for the amount of the 10 per cent. reservations stopped upon work executed up to the 30th September, in accordance with specification, and further the balance of account for all work executed to last certificate, deducting only the Bond of £1,000, and 10 per cent. upon all work performed since the 30th September.

I remain, &c.,

JNO. GIBBONS.

(For W. Randle.)

THE CITY COMMISSIONERS.

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No. 2.

THE CITY COMMISSIONERS to WILLIAM RANDLE, Esq.

*City Commissioners' Office,*  
*Sydney, 17 October, 1855.*

SIR,

With reference to your letter of the 12th instant, forwarding particulars of the works executed by you on the City Sewerage, up to the 28th ultimo, and requesting that payment may be made to you on account of such works, in accordance with the conditions of contract, I have the honor, by direction of the City Commissioners, to inform you, that the City Engineer and his Assistants have been instructed to examine and re-measure the works performed, and that your request will be duly attended to when the necessary information has been submitted to the Commissioners, to enable them to ascertain the correctness of your statement.

I have, &c.,

CHAS. H. WOOLCOTT,

Secretary.

WILLIAM RANDLE, Esq.

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No. 3.

WILLIAM RANDLE, Esq., to THE CITY COMMISSIONERS.

*Bligh-street, Sydney,*  
17 November, 1855.

GENTLEMEN,

I shall feel obliged by your paying me this day the sum of £3,615 6s. 2d., being the balance due to me upon the certificate sent in, up to the 8th instant, for work done under my contract for the sewers of this City.

I have, &c.,

WM. RANDLE.

THE CITY COMMISSIONERS.

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No.

No. 4.

THE CITY COMMISSIONERS to WILLIAM RANDLE, ESQ.

*City Commissioners' Office,  
Sydney, 17 November, 1855.*

SIR,

In answer to your letter of this date, requesting that the sum of £3,615 6s. 2d., being the balance due upon the certificate for sewerage works up to the 8th instant, might be paid to you this day, I have the honor to state that the City Commissioners regret that they are not in a position at present to comply with your request.

I have, &c.,  
CHAS. H. WOOLCOTT,  
Secretary.

WILLIAM RANDLE, ESQ.

No. 5.

WILLIAM RANDLE, ESQ., to THE CITY COMMISSIONERS.

*Bligh-street, Sydney,  
17 November, 1855.*

GENTLEMEN,

I beg to acknowledge the receipt of your letter of this day, apprising me that you are not in a position to comply with my request for payment of the balance—£3,615 6s. 2d.—due to me upon certificates sent in; in consequence of which I lose no time in apprising you that the whole of the men employed under my contract for the sewers will be discharged this night, and shall hold you responsible for any damage or extra expense that may arise in consequence of being obliged to take this step, as well as for the expenses which may be incurred in watching, lighting, and pumping.

I have further to observe, that unless the amount be paid by 12 o'clock on Wednesday, the 21st instant, I shall immediately commence proceedings for recovery of the same.

I have, &c.,  
WM. RANDLE.

THE CITY COMMISSIONERS.

No. 6.

THE CITY COMMISSIONERS to WILLIAM RANDLE, ESQ.

*City Commissioners' Office,  
Sydney, 22 November, 1855.*

SIR,

With reference to my letter to you, of date the 17th instant, stating that the City Commissioners were not in a position to pay you the balance due on your contract for sewers, I am directed to inform you that, on fully considering the matter, they are still unprepared, pending the investigation by the Committee of the Legislative Council, to make a final payment to you on account of any portion of the sewers; but, to prevent the stoppage of the works, they will continue the usual fortnightly advance of ninety per cent., and also make you a payment of £2,000 towards the settlement of the quarterly account, on receiving from you a letter stating your willingness to allow any errors which may have been, or may hereafter be made, in the amount of money paid you on account of your contract, from whatever cause such errors may be proved to have arisen, to remain an open question, subject to revision and correction, up to the very last moment of the Commissioners receiving over from you the works in question as completed; and, further, that at such final settlement you undertake to refund any sums which may have been overpaid from the inaccuracy of certificates or otherwise: while, on the other hand, the Commissioners will compensate you in any case where, from similar causes, it can be shewn that you have been underpaid for any portion of your contract.

I have, &c.,  
CHAS. H. WOOLCOTT,  
Secretary.

WILLIAM RANDLE, ESQ.

## No. 7.

MESSRS. WANT, ROXBURGH, AND WANT, to THE CITY COMMISSIONERS.

42, Pitt-street,  
24 November, 1855.

GENTLEMEN,

Mr. Randle having previously advised with us on the subject of the difference between you relative to the Sydney Sewers, has placed in our hands your letter of the 22nd instant, with instructions to reply to it.

He desires us to say that, although legally the various settlements you have made with him are final, and could not in strictness be the subject-matter of investigation, still he has no desire to avoid a fair and just inquiry into his work, satisfied as he is that every portion of it is well and faithfully performed.

For the past settlements, therefore, he will (subject to the terms and on compliance by you of the conditions of your letter of the 22nd November instant,) consent to allow any error which may have been made, or may hereafter be made, in the amount of money paid on account of work already performed under his contract with you, from whatever cause such errors may be proved to have arisen, to remain an open question subject to revision and correction. Mr. Randle also agrees to refund any sums which may have been overpaid from the inaccuracy of certificates or otherwise; the Commissioners, on their part, agreeing to compensate him in any case where, from similar causes, it can be shown that Mr. Randle has been underpaid for any portion of his contract.

Having thus far yielded, for your satisfaction, to the outcry raised by a malicious cabal, *so far as his past work is concerned*, Mr. Randle desires us emphatically to protest against any re-opening of settlements which shall be made *for any future works* he may perform.

The Commissioners may employ as many supervisors as they think fit, but any objection to his further work must be made before the payments are made, and whilst the work *can be fairly examined*—but all future settlements must be final.

We are, &amp;c.,

WANT, ROXBURGH, AND WANT.

THE CITY COMMISSIONERS.

## No. 8.

WILLIAM RANDLE, Esq., to THE CITY COMMISSIONERS.

Bligh-street, Sydney,  
3 January, 1856.

GENTLEMEN,

In accordance with the condition of my contract with you, I beg to forward you my Quarterly Measured Account, up to the 31st December, 1855, which shews a balance in my favour of £8,230 5s. 1d., which I shall feel obliged by your paying me on the 5th instant, when I shall wait upon you for that purpose.

In the course of a few days I hope to hand over my Day Account up to the same period.

I have, &amp;c.,

WM. RANDLE.

THE CITY COMMISSIONERS.

## No. 9.

THE CITY COMMISSIONERS to WILLIAM RANDLE, Esq.

City Commissioners' Office,  
Sydney, 12 January, 1856.

SIR,

With reference to the half-yearly measurement of the Sewerage Works performed by you to the 31st December last, I am directed by the City Commissioners to inform you, that after giving the subject their most careful consideration, and obtaining the best scientific and practical advice in their power, they are of opinion that the strata through which the tunnelling is carried in the streets south of Market-street, are, as far as can be ascertained, very similar in character—neither all rock nor all soil in the meaning of the contract, but a mixture of both in different proportions—and that the most equitable mode for adjusting the accounts will be, to consider the tunnelling in these localities as passing through half rock and half soil.

On

On this principle the City Commissioners are prepared, in terms of the contract, to pay you for the tunnelling in Pitt and Elizabeth streets, from Market to Bathurst-street, and in Castlereagh-street, as far as completed, to the south of Market-street, as driven through half rock and half soil, and the balance on the remaining portion of the contract, according to the certificate of the City Engineer, on the express understanding contained in my letter to you of the 22nd November,—that if any errors arising from inaccuracy of measurement, or otherwise, be discovered, either in your favour or that of the Commissioners, the same shall be open for adjustment, on either side, before the works in the present contract are completed, and finally handed over to the City Commissioners; and that this offer, on the part of the Commissioners, shall be without prejudice, should any ulterior proceedings become necessary from its non-acceptance by you.

I am to add that the Commissioners desire that the Sewerage Works may be resumed by you without further delay.

I have, &c.,  
**CHAS. H. WOOLCOTT,**  
 Secretary.

**WILLIAM RANDLE, ESQ.**

No. 10.

**WILLIAM RANDLE, ESQ., to THE CITY COMMISSIONERS.**

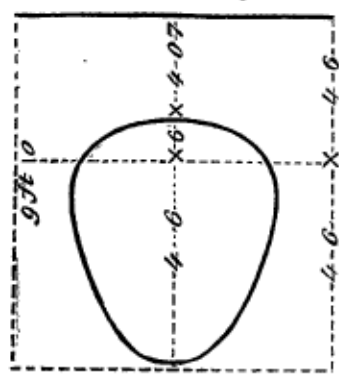
*Bligh-street, Sydney,*  
 14 January, 1856.

GENTLEMEN,

With reference to your letter of the 12th instant, acknowledging the receipt of my Bill for the quarterly (not half-yearly) measurement of the Sewerage Works, performed by me to the 31st December last, and informing me that from the opinion you have been led to form of the strata through which the tunnelling is carried in the streets south of Market-street, the most equitable mode for adjusting the accounts will be to consider the tunnelling in these localities as passing through half rock and half soil; and that on this principle you are prepared to pay me, in terms of the contract, for the tunnelling in the streets alluded to, as far as done south of Market-street, and the balance on the remaining portion of the contract according to the certificate of the City Engineer, on the express understanding contained in your letter to me of the 22nd November last, and that this offer on your part is without prejudice;—

I have the honor to observe, that although I am fully persuaded from my own measurements, confirmed as I am in them by your own Engineer, I am fully entitled to the whole of my claim, yet, rather than not settle the matter amicably, and in order to obtain an immediate settlement, I am willing to meet your views, and to submit to a reduction founded in a certain degree upon your own proposition.

You suggest that the strata south of Market-street approximates to half rock and half soil, in the streets alluded to in your letter, and I beg to refer you to the undisputed fact, that in Elizabeth-street, south of Market-street, the open cutting has been measured and allowed for upon that data; therefore as the tunnelling is driven at the lowest level in the same locality, the strata must have a greater affinity to rock than to soil, consequently I am sure it will be evident to yourselves that your deduction of considering it half rock and half



soil cannot be maintained; and to demonstrate more fully my argument, I beg to refer you to the annexed diagram to scale, by which it will be seen that assuming the upper half to be entirely soil, and the lower half entirely rock, the tunnelling would be one-tenth in depth through the former and nine-tenths through the latter strata; but as it is possible that the stratum be not entirely separated in character but an amalgam of both, rock predominating, I am prepared to allow the length of tunnelling and open cutting in Elizabeth-street which is not disputed, to be an admixture of the two strata, and to apply that length to all the streets south of

Market-street, as far as completed, in the proportion of three-fourths rock and one-fourth soil. This, I trust, will be considered as a most liberal concession on my part, and is made by me with the sole desire of accommodating the views of the Commissioners and obtaining a quick settlement.

As to the portion of your letter desiring that this settlement is still to remain open to future revision, I must give a most distinct refusal; and in Mr. Want's letter to you of the 24th November last, he assented on my part that all the then *past* work should be open to revision and correction, and this I have now carried out to the letter; but to suppose that I am to allow this revised and corrected, now compromised and settled, measurement to be open again to future investigation would be not only most unbusiness-like, but unfair. No contracts could ever be carried out under such a system.

This letter is to be considered as strictly private and confidential to the Commissioners only, and is not in any way to be used against me, in the event of my proposition not being acceded to.

I have further to add, that I shall not be prepared to resume the Sewerage Works until I shall have been paid up the amount due to me, and that as my offer is a final one, unless it be accepted by Wednesday morning next, I shall consider that the Commissioners refuse it, and shall be obliged to take such steps for the recovery of my claim as my Solicitors may advise.

I have, &c.,

WM. RANDLE.

THE CITY COMMISSIONERS.

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No. 11.

WILLIAM RANDLE, Esq., to THE CITY COMMISSIONERS.

*Bligh-street, Sydney,*

15 January, 1856.

GENTLEMEN,

Adverting to our interview of yesterday, subsequent to your receipt of my letter of the same day, I have re-considered the whole question as discussed, and have come to the following conclusion, in the spirit of compromise, but without yielding my original opinion as to the strata:—

Elizabeth-street is to remain as it is now charged in my bill to 31st December last.

Castlereagh-street, as far as the tunnelling is done south of Market-street, to be considered as passing through two-thirds rock and one-third soil.

Pitt-street, the same as Castlereagh-street, excepting 310 feet lineal next to, and south of Market-street.

The difference in amount between Market and Bathurst streets is shewn in the accompanying Dr. and Cr. statement, as well as the balance due to me upon the bill above alluded to.

I trust that the above concession will be satisfactory, and that I may be favoured with an early reply.

Herewith, I beg to hand you a copy of the professional opinion of Mr. Hodgson as to the strata, which corroborates my previously formed opinion, strengthened still further as it is by the suppressed evidence of the Revd. Mr. Clarke before the Select Committee.

I have, &c.,

WM. RANDLE.

THE CITY COMMISSIONERS.

[Enclosure 1 in No. 11.]

STATEMENT shewing the difference between the Measurement made by the City Engineer, and that agreed upon between the City Commissioners and Mr. Randle, in Castlereagh and Pitt Streets, up to 31st December, 1855.

<i>Per Engineer's Certificate, December 31, 1855.</i>				<i>Per Agreement.</i>					
				£	s.	d.	£	s.	d.
<b>CASTLEREAGH STREET SEWER.</b>									
492-1 feet lineal tunnelling in rock	...	...	£4 0 0	1,968	6	8	425-1 feet lineal tunnelling in rock	...	£4 0 0
72-9 " " "	...	...	4 0 0	291	0	0	212-6 " " soil	...	1 18 0
72-9 " " soil	...	...	1 18 0	188	4	6	Balance	...	
<u>637-7</u>				<u>£2,397</u>	<u>11</u>	<u>2</u>	<u>637-7</u>		<u>£2,397</u>
<b>PITT STREET SEWER.</b>									
1,264 feet lineal tunnelling in rock	...	...	4 10 0	5,688	0	0	310 feet lineal tunnelling in rock	...	£4 10 0
							636 " " "	...	4 10 0
							318 " " soil	...	2 0 0
							Balance	...	
				<u>£5,688</u>	<u>0</u>	<u>0</u>	<u>1,264</u>		<u>£5,688</u>
Balance in Castlereagh-street	...	...	...	293	9	6	Amount of Engineer's Certificate to December 31, 1855	...	81,256
Balance in Pitt-street	...	...	...	795	0	0	Amount of deduction, as above	...	1,088
<b>TOTAL</b>	...	...	...	<b>£1,088</b>	<b>9</b>	<b>6</b>	<b>BALANCE DUE</b>	...	<b>£80,167</b>

W. B. RIDER,  
Engineer.

SYDNEY SEWERAGE WORKS.

[Enclosure

[Enclosure 2 in No. 11.]

Sydney, 16 November, 1856.

SIR,

I have examined the excavation for sewerage now in progress at the junction of Pitt and Park Streets, and I find that, from the surface to about twelve feet downwards, a stratum of clay overlays a bed of hard ferruginous sandstone.

This latter is in irregular masses, bound together by thin interstitial layers of clay, and would, in my opinion, offer more impediments to the excavator than rock more homogeneous in character, and is more difficult to remove than ordinary sandstone.

Allow me, &amp;c.,

CHARLES J. HODGSON,  
Consulting Chemist and Mineral Surveyor.

William Randle, Esq.

## No. 12.

THE CITY COMMISSIONERS to WILLIAM RANDLE, ESQ.

City Commissioners' Office,

Sydney, 17 January, 1856.

SIR,

In answer to your letter of the 15th instant, I am directed by the City Commissioners to inform you, that in re-considering the matter therein referred to, they have resolved to adopt the principle proposed by you for compromising the dispute as to the character of the strata through which the tunnelling of the sewers passes, in Castlereagh and Pitt Streets, to the southward of Market-street.

When the certificate of the Engineer has been altered, in accordance with the terms of your letter, the Commissioners will be prepared to pay you the balance due on the Sewerage Works performed by you to 31st December last.

I have, &amp;c.,

CHAS. H. WOOLCOTT,

Secretary.

WILLIAM RANDLE, ESQ.

## No. 13.

WILLIAM RANDLE, ESQ., to THE SECRETARY TO THE CITY COMMISSIONERS.

Bligh-street, Sydney,

4 July, 1856.

SIR,

I will thank you to bring to the notice of the City Commissioners the amount due to me, as under, up to the 31st December, 1855, and to request their order for payment of the same, for which I will call to-morrow morning.

Measured account balance	...	...	...	...	£1,506	11	0
Day ditto	...	...	...	...	487	17	8
					£1,994	8	8

I have, &amp;c.,

(For William Randle)

C. H. STOREY.

C. H. WOOLCOTT, ESQ.,  
Secretary.

## No. 14.

WILLIAM RANDLE, ESQ., to THE SECRETARY TO THE CITY COMMISSIONERS.

Bligh-street, Sydney,

5 July, 1856.

SIR,

I have the honor to forward to you my Day Account against the Commissioners up to the 30th ultimo, amounting to £882 8s. 7d.

Adverting to my letter of the 3rd instant, as to the quarterly accounts, I have the honor to apprise you, for the information of the Commissioners, that, with a view to prevent  
in



## SYDNEY SEWERAGE WORKS.

9

in future any difference between the City Engineer and myself, I proposed to that gentleman to take the quarterly measurement in conjunction with myself up to the 30th June last, but as that proposition has been declined, I have arranged with an independent professional gentleman to commence, on Tuesday next, the measurement of the whole of the work executed since the final settlement up to the 31st December, 1855, which will necessarily delay for some days sending in the account alluded to; at the same time, I shall feel obliged to the Commissioners if they will instruct their Engineer to allow me reference to any drawings bearing upon the works in question.

I have, &c.,

(For William Randle)

C. H. STOREY.

C. H. WOOLCOTT, Esq.,  
Secretary.

## No. 15.

THE CITY COMMISSIONERS to WILLIAM RANDLE, Esq.

*City Commissioners' Office,*

*Sydney, 9 July, 1856.*

SIR,

Referring to your letter of the 5th instant, forwarding your Day Account for Sewerage Works to the 30th ultimo and stating that you had arranged with a professional gentleman to measure the whole of the works executed since the final settlement up to the 31st of December last, the City Engineer having declined to take a quarterly measurement to the 30th June in connexion with yourself; I have the honor, by direction of the City Commissioners, to inform you that their Engineer does not require any further information than that already in his possession, to enable him to check the correctness of your account for the past quarter, and that the Commissioners do not consider that any settlement can be final until the whole contract is handed over to them, and certified by the City Engineer as being completed. It further appears to the Commissioners impossible for any person to ascertain correctly the extent of work executed in the sewers prior to the 1st January last, so as to furnish a measurement of the work performed since that date.

I beg also to state, that you will, of course, be permitted to refer to any plans in the office of the City Engineer in connexion with your contract, as requested in your letter above referred to.

I have, &c.,

CHAS. H. WOOLCOTT,

Secretary.

WILLIAM RANDLE, Esq.,  
&c., &c., &c.

## No. 16.

WILLIAM RANDLE, Esq., to THE SECRETARY TO THE CITY COMMISSIONERS.

*Bligh-street, Sydney,*

*14 July, 1856.*

SIR,

Adverting to your letter of the 9th instant, relative to the measurement of the works executed since the 31st December, 1855, I beg to observe, that I have no doubt, notwithstanding the opinion expressed by the City Commissioners to the contrary, but that I shall be able to arrive correctly at the extent of work alluded to.

With reference, however, to the observation, that the Commissioners do not consider that any settlement can be final until the whole contract is handed over to them, and certified by the City Engineer as being completed, I must beg again to refer them to Mr. Want's and my letter upon this subject, adverted to in my letter of the 3rd instant; and I cannot conceive that the Commissioners would wish now to repudiate what they acquiesced in at the period referred to. Clause 20, however, distinctly refers to the dates at which I shall deliver in bills "of the several works done by me during *each* preceding three months, and the amounts shall be paid"; thereby denoting every quarterly account to be a final one, as is further confirmed by the same amount being retained by the Commissioners as was placed in their hands at the commencement of the contract.

In accordance, therefore, with my view of the contract, I have the honor to request that the Commissioners will order payment to be at once made me of the balance upon the closed account up to the 31st December last, of which I hope to receive an early intimation.

I have, &c.,

(For Wm. Randle)

CHAS. H. WOOLCOTT, Esq.

C. H. STOREY.

No. 17.

THE CITY COMMISSIONERS to WILLIAM RANDLE, Esq.

*City Commissioners' Office,*

*Sydney, 16 July, 1856.*

SIR,

In reply to your letter of the 14th July, on the subject of the settlement of your account to the 31st December last, I am directed to state that the communication of the 24th November, 1855, addressed on your behalf to the City Commissioners by Messrs. Want, Roxburgh, and Want, and your letter of the 14th January last, both with reference to the finality of the quarterly measurements of the Sewerage Works, were not acquiesced in by the Commissioners.

And with regard to the balance due to you upon these works, I am desired to inform you, that in order at once to settle the question, the Commissioners will be prepared to balance all their accounts with you up to the 30th of June last, and to pay you the amount of balance that may be due upon the whole of the works executed, or upon any other account to that date, upon your furnishing detailed statements of the same, and upon their being duly certified as correct by the City Engineer.

But even in such a settlement the Commissioners will not consider that either party shall be precluded from any future correction of the amounts, should it be found at any time that there have been errors committed in either the measurements or calculations.

I have, &c.,

CHAS. H. WOOLCOTT,

WILLIAM RANDLE, Esq.,

Secretary.

&c., &c.

No. 18.

WILLIAM RANDLE, Esq., to THE SECRETARY TO THE CITY COMMISSIONERS.

*Bligh-street, Sydney,*

*18 July, 1856.*

SIR,

I have to acknowledge the receipt of your letter of the 16th instant, in reply to mine of the 14th, on the subject of the settlement of my account to the 31st December last.

I observe that you state, that the communication of the 24th November, 1855, addressed on my behalf to you by Messrs. Want, Roxburgh, and Want, and also my letter to you of the 14th January last, with reference to the finality of the quarterly measurement of the Sewerage Works, were not acquiesced in by the Commissioners.

In reply, I beg to state, that it was over and over again acquiesced in by the City Commissioners, and that it was only in order to have a final and positive settlement of account that I consented to the large deduction I did.

My letter, and that of my Solicitors, was clear and distinct upon the point; and so far from having received any letter from you refusing your assent to my positive proposition as to this being a settlement to a point of the accounts, that the Commissioners have repeatedly acknowledged the amount to be due.

The only reason why it was not paid was that the Commissioners claimed an amount from me in respect of bricks furnished to me, which they wished to make a matter of set-off, and which I disputed; this has since been adjusted, and there is therefore no reason why I should be kept any longer out of my money.

I will not now consent to the matter being for a third time re-opened.

I have, &c.,

WM. RANDLE.

CHAS. H. WOOLCOTT, Esq.,

Secretary.

## No. 19.

THE CITY COMMISSIONERS to WILLIAM RANDLE, ESQ.

*City Commissioners' Office,  
Sydney, 21 July, 1856.*

SIR,

In reply to your letter of the 18th instant, stating that your proposal with reference to the final settlement of the Sewerage Account was over and over again acquiesced in by the City Commissioners, I am requested again to state that the Commissioners cannot agree to any settlement as being final until the whole of the works comprised in your contract have been completed, and the account thereof duly certified by the City Engineer as correct.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

WILLIAM RANDLE, ESQ.,  
&c., &c.

## No. 20.

WILLIAM RANDLE, ESQ., to THE SECRETARY TO THE CITY COMMISSIONERS.

*Bligh-street, Sydney,  
22 July, 1856.*

SIR,

In pursuance of my letter of the 5th instant, I have the honor to furnish the City Commissioners the Measured Account of Work done to the Sewers from the 31st December, 1855, to the 30th June, 1856, amounting to £19,135 0s. 9d., shewing a balance in my favor upon the same of £6,911 5s. 9d., independent of the Day Account already delivered.

I will thank you to obtain for me a payment on account, for which I will call on Saturday next.

I have, &c.,

WM. RANDLE.

CHAS. H. WOOLCOTT, ESQ.,  
Secretary.

## No. 21.

THE CITY COMMISSIONERS to WILLIAM. RANDLE, ESQ.

*City Commissioners' Office,  
Sydney, 24 July, 1856.*

SIR,

Referring to your letter of the 18th instant, stating that the City Commissioners over and over again agreed to the final settlement of the Sewerage Account to the 31st December last, I have the honor, by direction of the Commissioners, to state once more that they cannot consent to any arrangement of account as being considered final until the completion of the whole contract and the production of the certificate of the City Engineer that the work has been satisfactorily performed.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

WILLIAM RANDLE, ESQ.,  
&c., &c.

No. 22.

THE CITY COMMISSIONERS to WILLIAM RANDLE, ESQ.

*City Commissioners' Office,**Sydney, 25 July, 1856.*

SIR,

With reference to your letter of the 4th instant, requesting payment of the amounts of the Measured and Day Accounts of the Sewerage Works to the 31st December, 1855, I have the honor, by direction of the City Commissioners, to transmit a copy of a Report which the City Engineer has submitted to them on the matter.

I have, &amp;c.

CHAS. H. WOOLCOTT,

Secretary.

WILLIAM RANDLE, ESQ.,

&amp;c., &amp;c., &amp;c.

[Enclosure in No. 22.]

*REPORT of City Engineer on Letter from Mr. Randle, dated 4 July, 1856.*

I have examined into the account rendered by Mr. Randle to December 31st, 1855, as far as I was able. It agrees with the measurement certified to by Mr. Rider, the late City Engineer, in the measurement book, but, exclusive of the imperfect rendering, it differs from my account of March 31st—in Pitt-street alone £1,228—about five or six hundred feet of sewer in Macquarie-street, charged as 14-inch work, is only 9-inch work; and there are so many other apparent errors in the account that I cannot recommend this amount to be paid. The Day Account has not been signed by my predecessor.

E. BELL,

City Engineer.

No. 23.

WILLIAM RANDLE, ESQ., to THE CITY COMMISSIONERS.

*Bligh-street, Sydney,**12 September, 1856.*

GENTLEMEN,

I herewith beg to hand you my measured account up to the 4th July last, and shall feel obliged by an early settlement of the balance due to me thereon.

I have, &amp;c.,

(For Wm. Randle,)

C. H. STOREY.

THE CITY COMMISSIONERS.

1856.

NEW SOUTH WALES.

**SEWERAGE AND WATER WORKS.**

(DEBENTURES ISSUED.)

*Ordered by the Legislative Assembly to be Printed, 7 November, 1856.*

A RETURN shewing the DEBENTURES issued on account of the CITY SEWERAGE and WATER WORKS, shewing the periods they have to run, and the annual INTEREST payable thereon.

SERVICES FOR WHICH LOANS HAVE BEEN CONTRACTED.	PARTICULARS OF LOANS.				RATE.	PARTICULARS OF INTEREST.	
	Year of Re-payments.		Principal Amount of Debentures Issued.			Annual Amount	
	At the option of the Government.	At the option of the Holder.	Amount of each Issue.	Total Issues for each Service.		On each Loan.	On total Loan for each Service.
Sydney Sewerage.....	3 months' notice	1859	10,000	178,300	4 per cent. per annum .....	400 0 0	8,789 5 6¼
	1860	1860	44,900		3¼d. do. per diem .....	2,219 5 6¼	
	1866	1866	97,500		5 do. per annum .....	4,875 0 0	
	1876	1876	25,900		do. do. do. ....	1,295 0 0	
Sydney Water Works .....	3 months' notice	1859	10,000	115,400	4 do. do. ....	400 0 0	5,659 13 9
	1860	1860	18,000		3¼d. do. per diem .....	889 13 9	
	1866	1866	50,700		5 do. per annum .....	2,535 0 0	
	1876	1876	36,700		5 do. do. ....	1,835 0 0	

Audit Office, Sydney,  
29 October, 1856.

W. C. MAYNE,  
Auditor General.



1856.

## NEW SOUTH WALES.

## SYDNEY SEWERAGE AND WATER WORKS.

(REVENUE AND EXPENDITURE.)

*Ordered by the Legislative Assembly to be Printed, 3 December, 1856.*

## (A.)

SCHEDULE shewing the total Sums appropriated by Government and received by the City Commissioners, for Sewerage and Water purposes, from 1st January, 1854, to 30th June, 1856.

	Appropriated.			Received.			Still Due.		
	£	s.	d.	£	s.	d.	£	s.	d.
<b>SEWERAGE.</b>									
Appropriated by Act of Council, 18 Vict., 36, for 1854 .....	33,675	0	0	10,000	0	0	23,675	0	0
Appropriated by same Act for 1855	95,750	0	0	95,750	0	0	.....		
Appropriated by Act 19 Vict., 42, for 1856.....	35,000	0	0	25,000	0	0	10,000	0	0
Total due of sums appropriated..	164,425	0	0	130,750	0	0	33,675	0	0
<b>WATER.</b>									
Appropriated by Act 18 Vict., No. 36, for 1854 .....	43,576	0	0	10,000	0	0	33,576	0	0
Appropriated by same Act for 1855	43,011	0	0	43,011	0	0	.....		
Appropriated by Act 19 Vict., 42, for 1856.....	20,000	0	0	.....			20,000	0	0
Total due of sums appropriated..	106,587	0	0	53,011	0	0	53,576	0	0

GILB. ELIOTT, Chief Commissioner.

 F. O. DARVALL, }  
 JOHN RAE, } Commissioners

## (B.)

ABSTRACT shewing the Receipts and Payments on account of Sewerage and Water Works,  
from 1st January to 30th June, 1856, after the distribution of Salaries, &c.

## SEWERAGE—SIX MONTHS TO 30TH JUNE, 1856.

	£	s.	d.
Balance due to Bank 31st December, 1855, per Second Yearly Report ...	1,572	5	3
Debentures on hand ... ..	4,180	0	0
	<hr/>		
Actual Balance 31st December, 1855, in favour of Sewerage ...	2,607	14	9
Actual Receipts (per Treasurer) ... ..	25,140	6	10
	<hr/>		
	27,748	1	7
Expenditure . . . . .	£23,684	17	8
½ Salaries ... . . . .	815	3	4
½ Office Expenditure ... ..	176	14	5
Interest to Government to 30th June .. ..	1,301	2	4
	<hr/>		
	25,977	17	9
	<hr/>		
Balance Cr. 30th June, 1856 .. .. .	1,770	3	10
	<hr/>		

## WATER.

Balance Cr. 31st December, 1855 ... ..	16,740	17	11
Actual Receipts .. .. .	24,808	7	9
	<hr/>		
	41,549	5	8
Expenditure (per Treasurer) ... ..	£32,196	13	11
½ Salaries ... .. .	815	3	4
½ Office Expenditure ... ..	176	14	5
Interest on Debentures ... ..	274	10	0
Interest to Government, 30th June ... ..	384	5	10
Debentures (balance of £7,600) to be paid off before 30th June ... .. .	3,100	0	0
	<hr/>		
	36,947	7	6
	<hr/>		
Balance Cr. 30th June, 1856 ... .. .	£4,601	18	2
	<hr/>		

GILB. ELLIOTT, Chief Commissioner.

F. O. DARVALL, }  
JOHN RAE, } Commissioners.



## (C.)

## WATER WORKS.

ESTIMATE of the probable Revenue and Expenditure of the City Commissioners, under the Sydney Water Act, for the Six Months ending 31st December, 1856.

ESTIMATED REVENUE.	£	s.	d.	£	s.	d.	ESTIMATED EXPENDITURE.	£	s.	d.	£	s.	d.
Proceeds of Water laid on to houses ... ..	3,500	0	0				SALARIES.						
Proceeds from Water Fountains .. ..	900	0	0				Of Engineer and Assistants, and 1 Inspector of Nuisances ... ..	871	5	0			
				4,400	0	0	Proportion of Commissioners, Secretary, Treasurer and Clerks, Solicitor, and Messenger ...	815	0	0			
Balance Cr. 30th June, 1856 (B.) ... ..	...	...		4,601	18	2	CONTINGENCIES.						
							Proportion of Office Expenditure ... ..	...	...				175 0 0
Balance of sums appropriated, but not yet received, as per separate schedule (A.) ... ..	53,576	0	0				GENERAL WORKS.						
From which must be deducted for Contracts entered into before 1856 :—							Works necessary for main supply ... ..	52,000	0	0			
For 30-inch Mains... ..	£21,000	0	0				Plotting trigonometrical survey ... ..	420	0	0			
For Steam Engines ... ..	18,000	0	0				Laying new Mains in Sydney ... ..	2,481	12	6			
	39,000	0	0				Expenses at Lachlan Swamp (vide Engineer's Report (F.) ... ..	1,006	1	8			
				14,576	0	0	INTEREST.						
							On loan from Government, to 30th June, 1856...	1,325	0	0			
Balance to be provided for by vote for 1856 ..	...	...		36,180	1	0	On probable advances, to 31st December, 1856...	664	0	0			
													1,989 0 0
				£59,757	19	2							£59,757 19 2

GILB. ELIOTT, Chief Commissioner.  
 F. O. DARVALL, }  
 JOHN RAE, } Commissioners.



## (E.)

*City Commissioners' Office,  
Engineer's Department,  
Sydney, 21 May, 1856.*

GENTLEMEN,

In compliance with your desire, I have now the honor to lay before you an estimate of the cost of completing the present Contract for Sewers, under section No. 1 of City Sewerage Works; of laying down a Sewer from the orifice of the Tunnel at Fort Macquarie to the north-east point of the Rock; and also for the cost of laying down the Principal Sewers over the whole of the same catchwater, or basin, and of which section No. 1 forms only a part, and the whole of which work may be done in the course of this and next year.

I will, in the first place, state to your Board, that while inspecting the works of section No. 1; which are now in progress, for the purpose of draining that part of the basin around Sydney Cove which lies on the east side of George-street, with a view to form an opinion of the general plan of those works, it appeared to me that the rest of the basin which lies to the westward of George-street should have been included in the same system of sewerage, and the sewage taken away through the same main outlet.

On comparing the sectional area of the Main Sewer with the superficial area of the whole basin, which drains itself into Sydney Cove, I was decidedly of opinion that the Main Sewer was of greater capacity than was absolutely necessary for section No. 1, and fully capable of draining most effectually, under all emergencies, the whole of the basin. I should have mentioned this in my Report to your Board of March 28, upon the progress and condition of the works; but, having been appointed by His Excellency the Governor General a member of a Committee to examine and report upon the general plan of the works, I thought, in the absence of special instructions from your Board to report upon the plan to you, it would be better in every respect to reserve my own individual opinion until I had laid my views before the gentlemen of the Committee with whom I had been appointed to act.

I have now the honor to inform your Board, that the views I entertained with regard to the drainage of the whole basin were fully coincided in by my colleagues of that Committee, and to lay before you an extract of the Committee's Report on the subject.

"With respect to the general plan of the works, so far as the Sewers are laid down for that portion of the City called section No. 1 of the "City Sewerage Works," bounded by George, Bathurst, and Macquarie streets, we consider it well adapted for the purpose for which it was intended. The gradients of all the Sewers laid down in that section are sufficient in every respect for carrying off the sewage matter and storm waters within the boundaries of the district, so as to allow of no accumulation of matter to deposit itself and obstruct the working of the Sewers.

"While making our inspection of the Sewerage Works under section No. 1, which lie chiefly on the eastern side of the Tank Stream, with a view to form an opinion of the general plan, our attention was directed, by the City Engineer, to the practicability of extending the usefulness of the works of this section, by draining the remainder of the same catchwater, or watershed, which lies on the western side of the Tank Stream, into the Main Sewer of section No. 1. (Section No. 1 is shewn tinted red in the accompanying plan, and the remainder of the catchwater basin proposed to be drained into the same Main Sewer is tinted blue, and comprises an area of 65 acres.)

"On computing the sectional areas of these Sewers, and comparing them with the superficial area of the district they are intended to drain, we find them of much greater capacity than is absolutely necessary, and that they are capable of effectually draining a much larger area than that allotted to them.

"The Main Sewer is 6 feet high by 4 feet wide, and extends from the foot of Pitt-street to the point of discharge at Fort Macquarie, its sectional area is  $18\frac{1}{2}$  feet, which is equal to the drainage of (557) five hundred and fifty-seven square acres, whilst the area to be drained by section No. 1 City Sewerage Works, amounts to no more than (141) one hundred and forty-one acres.

"On looking at the basin or watershed which naturally drains itself towards the Tank Stream, into Sydney Cove, and of which basin the area of section No. 1 forms only a part, it is obvious that the portion of the basin westward of the Tank Stream should be drained by the same outlet as that on the eastern side, excepting a small portion lying round Sydney Cove, which always has, and must, on account of its low level, drain itself by that source. Although it was not originally the intention to drain the western portion of the basin through the Main Sewer now constructing, we have found from the above computation, that it is of sufficient capacity to effectually drain the whole basin, the total area of which amounts to 207 acres, whilst the capacity of the Main Sewer is equal to (557) five hundred and fifty-seven acres, thereby leaving a large margin for any extraordinary fall of storm water that may be ever likely to occur.

"Having satisfied ourselves that the capacity of the Main Sewer is sufficient to drain the whole of the district above referred to, we have directed our attention to the means of draining the additional area by this source, and find that there will be no difficulty; the

"only alteration which the City Engineer thinks it probable he may have to make in the present Sewers being, to take up the small piece of 3ft. 6in. Sewer now laid in Bridge-street, and replace it by a 4ft. 6in. Sewer, to connect with the Main at its present junction at the foot of Pitt-street, and this alteration is all that we consider likely to be necessary to effect this object.

"It is obvious, therefore, from these suggestions, and a view of the plan of the district, that this system of drainage will be quite as effective, and far less expensive, than constructing a Main Sewer through George-street, besides avoiding the great inconvenience that the town would be put to by the obstruction of the traffic through the principal thoroughfare of the City."

In addition to the great inconvenience which will be avoided by the non-obstruction of George-street, your Board will perceive by the plan I have annexed hereto, that the system of drainage which I propose, and have laid down for the district on the western side of George-street, (coloured blue) will save a large outlay, by obviating the necessity of making a Main Tunnel from the neighbourhood of the Macquarie Barracks to the extreme end of Dawes' Point.

The districts coloured yellow and grey on the plan could not have been drained by such tunnel, but must have been drained as shewn, each by its own outlet, the one to discharge into Sydney Cove, the other at Dawes' Point.

Thus I venture to hope that your desire, so strongly expressed to me in directing my attention to the drainage of this part of the City, that I would keep in view the strictest economy combined with the greatest efficiency and due regard to the convenience of the public, has been carefully and satisfactorily complied with.

Your Board will also perceive, by the plans which I have prepared, and shall have the honor to lay before you, that in accordance with the desire of His Excellency the Governor General, expressed through your Board, I have made suitable provision in the Sewer near Macquarie Fort for intercepting the sewage when it may be considered desirable and convenient to use the sewage matter for agricultural purposes.

That part of the basin westward of George-street, and which is tinted blue on the plan, I have embodied in section No. 1 of the City Sewerage Works, and the drainage of it is included in the following estimate.

I have devoted much attention and care in preparing the following estimate; and in order to perform the work within the sum named, by the end of the year 1857, I propose to divide it into several contracts of such moderate dimensions as will bring them within the capacity of all respectable contractors of Sydney to execute.

ESTIMATE of the cost of completing the Sewerage Works eastward of George-street, under Section No. 1, and the extension of the same section, being the remainder of the catch-water, or basin, which drains itself in Sydney Cove:—

For the completion of the Contract, under Section No. 1, let to Mr. William Randle, comprising the Main Tunnel, Pitt, Castlereagh, Elizabeth, Phillip, and Macquarie street Sewers	...	...	...	...	£22,600	0	0
For making the Main Sewer from the face of Tunnel to the extreme point of rock at Fort Macquarie	...				8,500	0	0
For making the Sewers in the cross streets running east and west in Section No. 1, and the extension westward of George-street	...	...	...	...	67,943	2	10
TOTAL	...	...	...	...	£99,043	2	10

I beg to observe, that of the above items, the first and second, and £20,000 of the third, will be required for this year, and the balance for next year.

I have, &c.,

E. BELL, M. Inst. C.E.,  
City Engineer.

The Commissioners  
for the City of Sydney.

No. 445.

(F.)

*City Commissioner's Office,  
Engineer's Department,  
Sydney, 21 May, 1856.*

GENTLEMEN,

I have the honor to inform you, that, since handing you my Report of the 22nd March last, upon the New Water Works about to be erected at Botany, I have had plans and sections of the entire work necessary to bring the water into and supply the whole of Sydney (with the exception of the very highest parts,) sufficiently perfected to prepare and lay before you herewith a careful estimate of the probable cost of those works.

It is desirable, however, I should inform your Board, in the first place, that I have thought it necessary to make alterations in the original plan, in order to ensure efficiency and economy, they are as follows, viz. :—

To reduce considerably the height of the sea embankment, and depth and size of the reservoir at Botany; the original plan was so arranged that no estimate of their cost could be made.

The plan and construction of the stand-pipe has been so altered that the column of pressure against the engine may not be constant and so high as 210 feet, but fluctuate according to the height of the high or low service reservoir.

To construct a low service reservoir in, and high service reservoir near, Sydney. The former will supply about thirteen-fifteenths of the whole City, and forms that part now estimated to be supplied in the year 1857. The latter, which is now being surveyed, will be only a small work in comparison with the former, but at a higher elevation (about 60 feet). It, and the mains in connexion with it, must form a supplementary estimate to this, and should be done in the year 1858.

The 30-inch main was intended originally to be laid only so far as Chippendale toll-bar, and thence to distribute the water, by smaller mains, to the different parts of the town. It is necessary that the 30-inch main should be laid the whole distance from Botany to the town low service reservoir, and thence to Hyde Park, where the present distributing mains to the various parts of the town may be connected with it. One thousand more 30-inch main pipes will be necessary for this purpose, in lieu of the several smaller mains, and should be ordered forthwith; but the thickness of them will be sufficient, if made  $\frac{2}{3}$  of an inch in thickness instead of  $1\frac{1}{8}$  inch, as formerly ordered, on account of their having to be laid on a higher level, and, consequently, subject to a much less pressure.

To change the intended site for the engine house and machinery, and select a site which is more suitable for the required foundations, better situated for giving a straight direction to the 30-inch main pipe, and entails much less costly works.

I have devoted much care and attention in preparing the following estimate; and, in order to perform the work, within the sum named, by the end of the year 1857, I propose to divide it into several contracts, of such moderate dimensions, as will bring them within the capacity of all respectable contractors of Sydney to execute.

ESTIMATE of the probable Expenditure that will be required to carry out the new works for supplying Sydney with Water by the end of the year 1857, if carried on without delay, in addition to the sums already advanced :—

	£	s.	d.
<i>Works at Botany.</i>			
For sea embankments and walls, sluices, weir, and masonry connected with them, and coffer dam at west end of embankment; water channel to the pumps, engine house, boiler house, and the necessary foundations for engines, the boiler seatings, and flues, chimney stock, stand-pipe framing and foundations; the necessary suction and delivery pipes ... ..	64,720	0	0
<i>Works between Botany and Low Service Reservoir at Sydney.</i>			
Excavations and embankments from Engine-House at Botany, piling across swamps, laying 8,300 yards of 30-inch main piping ... ..	33,580	0	0
3,000 yards of 30-inch main piping, $\frac{2}{3}$ of an inch thick, in addition to that already ordered ... ..	12,650	0	0
Bend pipes for 30-inch main, necessary sluices in main and branch to high level Reservoir ... ..	3,200	0	0
<i>Works in Sydney.</i>			
Purchase of land at Crown-street for the low service Reservoir ... ..	8,000	0	0
Excavations for Reservoir, 200 feet by 200 feet, by 20 feet deep, brickwork, masonry, roofing, and boundary walls, laying 900 yards of 30-inch main pipes from Reservoir to Hyde Park, and connecting the present mains to it ... ..	29,800	0	0
Superintendence and general expenses ... ..	7,400	0	0
	£159,350	0	0

I beg to observe, that of the above sum about £60,000 will be required for this year, and the remainder for next year.

I have, &amp;c.,

To the Commissioners  
for the City of Sydney.

E. BELL, M. Inst. C. E.,  
City Engineer.



## NEW SOUTH WALES.

## SYDNEY SEWERAGE AND WATER WORKS.

(RECEIPTS AND EXPENDITURE FROM 1 JANUARY, 1854, TO 30 JUNE, 1856.)

*Ordered by the Legislative Assembly to be Printed, 16 December, 1856.*

ABSTRACT of Receipts and Expenditure of the City Commissioners under the Sewerage Act of 1853, from 1 January, 1854, to 30 June, 1856.

287—A	1854.					1855.					1856.												
	RECEIPTS :					£	s.	d.	£	s.	d.	EXPENDITURE :											
	Government	...	...	...	...	10,000	0	0				General works, cleansing sewers, wages, bricks, } survey of City	5,872	11	5								
	Other sources	...	...	...	...	32	10	0				Salaries and office expenses	3,209	2	8								
	See First Yearly Report of Commissioners, pp. 7, 8, and 25.								10,032	10	0	For details, see First Yearly Report of Commissioners.											
												Balance, 31 December, 1854					950	15	11				
									10,032	10	0									10,032	10	0	
	1855.											1855.											
	Balance, 31 December, 1854											Expenditure :											
	Receipts :											General works, cleansing sewers, wages, bricks, } clay pipes, survey, castings for sewers, } interest, and incidents					20,299	15	5				
	Government	...	...	...	...	95,750	0	0				Main Sewers, Randle's contract	72,487	17	7								
	Other sources	...	...	...	...	1,881	15	5				Salaries and office expenses	3,187	3	7								
	See Second Yearly Report of Commissioners, pp. 6, 7, 14, and 15.								97,631	15	5	For details, see Second Yearly Report of Commissioners.									95,974	16	7
												Balance, 31 December, 1855					2,607	14	9				
									98,582	11	4									98,582	11	4	
	1856.											1856.											
	Balance, 31 December, 1855											Expenditure to 30 June :											
	Receipts to 30 June :											General works, cleansing sewers, wages, bricks, } survey, castings for sewers, interest, and } incidents					7,375	1	4				
	Government	...	...	...	...	25,000	0	0				Main Sewers, Randle's contract	17,403	14	0								
	Other sources	...	...	...	...	144	12	2				Salaries and office expenses	1,792	5	2								
									25,144	12	2	For details, see Treasurer's Statement A.									26,571	0	6
												Balance, 30 June, 1856					1,181	6	5				
									27,752	6	11									27,752	6	11	

ABSTRACT of the Receipts and Expenditure of the City Commissioners, on account of the Sewerage Fund, from 1 January to 30 June, 1856.

RECEIPTS.			EXPENDITURE.							
	£	s. d.	£	s. d.						
Proceeds of sale of sewerage pipes ... ..	48	3 0			Salaries of Officers ... ..	800	7 5			
Brick Works ... ..	8	6 8			Main Sewer { Randle ... ..	£17,403	14 0			
Repayment for works ... ..	88	2 6			{ Castings ... ..	3,153	4 5			
Surcharges recovered ... ..	445	7 3			General works ... ..	706	10 1			
			589	19 5	City Survey ... ..	368	0 1			
Debentures on hand, 1st January, 1856, since sold	.....		4,180	0 0	Brickworks ... ..	831	18 9			
Balance due to Colonial Government, 30th June, 1856 ... ..	.....		130,750	0 0	Interest to Colonial Government ... ..	2,277	18 0			
					Repayment of Advances ... ..	991	17 9			
					Incidental Expenses ... ..	37	10 0			
								26,571	0 6	
					Balance due to Joint Stock Bank, 1st January, 1856	2,017	12 6			
					Colonial Government, 1st January, 1856 ...	105,750	0 0			
								107,767	12 6	
					Balance due by the Joint Stock Bank, 30th June, 1856... ..	.....			1,181	6 5
			135,519	19 5					135,519	19 5

City Treasurer's Office,  
Sydney, 8 July, 1856.

EDWARD LORD,  
City Treasurer.

SEWERAGE—Estimate for Six Months, ending 31 December, 1856.

	£	s. d.	£	s. d.	Probable Expenditure.	£	s. d.	£	s. d.
Balance 30 June ... ..	.....		1,181	6 5	Salaries ... ..	1,701	8 4		
Balance of sums appropriated, but not received ...	33,675	0 0			Cleansing Sewers, &c. ... ..	541	16 7		
Balance to be provided .. ..	22,823	18 6			Interest ... ..	3,917	0 0		
			56,498	18 6	Towards completion of Randle's contract ... ..	22,600	0 0		
					Outlet of main sewer ... ..	8,500	0 0		
					On account of cross sewers ... ..	20,000	0 0		
					Survey of City ... ..	420	0 0		
			57,680	4 11				57,680	4 11

See Report of Engineer, dated 21 May, 1856, for Sewerage Estimates.



STATEMENT of Receipts and Expenditure under the Sydney Sewerage Act, from 1 July to 3 December, 1856.

RECEIPTS.		AMOUNT.	DISBURSEMENTS.		AMOUNT.
		£ s. d.			£ s. d.
Sale of Sewerage pipes ... ..		72 11 8	Salaries of Officers ... ..		635 8 4
Brick Works ... ..		1,644 19 11	Main Sewers ... ..	£17,553 16 4	
Miscellaneous Receipts ... ..		100 0 0	Sub Drains, &c. ... ..	330 0 0	
Colonial Government ... ..		33,675 0 0			17,883 16 4
			General Works ... ..		1,031 16 10
			City Survey ... ..		540 12 7
			Brick Works ... ..		300 1 4
			Interest ... ..		748 7 5
			Incidental ... ..		72 2 7
Total amount of Receipts ... £		35,492 11 7	Total amount of Expenditure ... ..		21,212 5 5

	£ s. d.
Payments to Randle, 1855 ... ..	£72,487 17 7
To 30 June, 1856 ... ..	17,403 14 0
From 1 July to 3 December, 1856 ... ..	17,553 16 4
Total ... ..	<u>£107,445 7 11</u>

WATER.—Estimates for Six Months ending 31 December, 1856.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
Balance 30 June, 1856 ... ..	.....	£3,454 15 7	Probable Expenditure :		
Probable Receipts ... ..	.....	4,400 0 0	Salaries and Office Expenses ... ..	1,861 5 0	
Balance of sums appropriated, but not received ...	£53,576 0 0		General Works—main supply ... ..	52,000 0 0	
Less contracts entered into, 30 inch main £21,000			Survey ... ..	420 0 0	
Steam Engines ... .. 18,000			New Mains ... ..	2,481 12 6	
	39,000 0 0		Lachlan Swamp ... ..	1,006 1 8	
		14,576 0 0	Interest to Government ... ..	1,989 0 0	
Balance to be provided for 1856 ... ..	...	37,327 3 7			59,757 19 2
		59,757 19 2			59,757 19 2

ABSTRACT of the Receipts and Expenditure of the City Commissioners on account of the Water Fund, from 1 January to 30 June, 1856.

RECEIPTS.			EXPENDITURE.			
	£	s. d.	£	s. d.	£	s. d.
Proceeds of water laid on to houses ... ..	5,071	14 2			Salaries of Officers ... ..	802 0 9
Sale of water at Hyde Park ... ..	588	14 9			General Works ... ..	22,973 10 2
" " Dockyard ... ..	183	1 6			Lachlan Swamp ... ..	714 17 8
" " Soldiers' Point ... ..	113	16 9			Botany Works ... ..	120 12 5
Rent of Fountain, South Head Road ... ..	24	0 0			City Survey ... ..	368 0 1
Surcharges recovered ... ..	685	7 3			Interest to the Colonial Government ... ..	1,031 11 8
Miscellaneous receipts ... ..	16	1 0			Compensation for land ... ..	14,200 0 0
					Law expenses .. ..	392 3 11
					Incidental expenses ... ..	37 10 0
			6,682 15 5		Re-payment of advances ... ..	1,266 7 9
Balance due by Joint Stock Bank, 31st January, 1856 ... ..			16,055 10 8		City Fund, Debentures, and Mortgage ... ..	7,600 0 0
Balance due to the Colonial Government, 30th June, 1856 ... ..			67,603 3 11			
						49,506 14 5
					Balance due by Joint Stock Bank, 30th June, 1856 ... ..	3,454 15 7
					Balance due to Colonial Government; 1st January, 1856 ... ..	37,380 0 0
			90,341 10 0			90,341 10 0

The above amount, for General Works, is composed of the following items:—

	£	s. d.
Wages ... ..	1,300	2 6
Cartage and wharfage ... ..	607	18 0
Cast iron pipes ... ..	20,713	0 4
Fire plugs ... ..	40	1 0
Repairs and sundries ... ..	312	8 4
	22,973	10 2

City Treasurer's Office,  
Sydney, 8 July, 1856.

EDWARD LORD,  
City Treasurer.

ABSTRACT of Receipts and Expenditure of the City Commissioners under the Water Act of 1853, from 1 January, 1854, to 30 June, 1856.

1854.		£	s.	d.	£	s.	d.	1854.		£	s.	d.	£	s.	d.					
<b>RECEIPTS.</b>																				
Government...		10,000	0	0				EXPENDITURE.		3,677		9	5							
Other sources		4,070	18	10				General works, pipes, wages, forage, Survey of City		4,157		13	1							
							14,070	18	10	Salaries and office expenses...		3,679		6	5					
									Interest on Water Debentures		1,438		3	4						
															12,952	12	3			
See First Yearly Report of the Commissioners, p. p. 7, 8, 9, 24.							14,070		18	10					1,118		6	7		
															14,070		18	10		
<b>1855.</b>																				
Balance 31st December, 1854							1,118		6	7										
<b>Receipts.</b>																				
Government		27,380	0	0																
Other sources		6,385	5	2			33,765		5	2										
See Second Yearly Report of the Commissioners, p. p. 6, 7, 8, 13, 14.																				
							34,883		11	9										
<b>1856.</b>																				
Balance 31st December, 1855							16,740		17	11										
<b>Receipts.</b>																				
Government		30,223	3	11																
Other sources		£ 6,682	15	5																
Less surcharges		685	7	3			5,997		8	2										
							36,220		12	1										
Balance per Treasurer		£ 16,055	10	8																
Surcharges		685	7	3																
Balance as above		16,740	17	11																
							52,961		10	0										
<b>1855.</b>																				
<b>Expenditure.</b>																				
General works, pipes, wages, forage, survey, interest, Law and incidents											11,901		3	5						
Lachlan Swamp											1,910		16	0						
Botany Works											869		16	8						
Salaries and office expenses...											3,460		17	9						
For details, see Second Yearly Report.																				
Balance 31st December, 1855							34,883		11	9							18,142		13	10
																	16,740		17	11
																	34,883		11	9
<b>1856.</b>																				
<b>Expenditure.</b>																				
General works, survey, interest, &c.											24,410		11	11						
Lachlan Swamp											714		17	8						
Botany Works											120		12	5						
Compensation for land resumed											14,592		3	11						
Water Debentures paid off											7,600		0	0						
Salaries and office expenses...											2,068		8	6			49,506		14	5
Balance 30th June, 1856																	3,454		15	7
For details see Treasurer's statement (B.)																				
																	52,961		10	0

STATEMENT of Receipts and Expenditure under the Sydney Water Act, from 1 July to 3 December, 1856.

RECEIPTS.								AMOUNT.			DISBURSEMENTS.								AMOUNT.		
								£	s.	d.									£	s.	d.
Water laid on to houses	...	...	...	...	...	...	...	1,663	10	4	Salaries of Officers...	...	...	...	...	...	...	656	5	0	
Hyde Park Fountain	...	...	...	...	...	...	...	423	8	6	General Works	...	...	...	...	...	...	28,990	10	11	
Dockyard	...	...	...	...	...	...	...	85	8	4	City Survey	...	...	...	...	...	...	540	12	7	
Soldiers' Point	...	...	...	...	...	...	...	29	12	9	Lachlan Swamp	...	...	...	...	...	...	1,010	1	8	
South Head Road	...	...	...	...	...	...	...	16	0	0	Botany Works	...	...	...	...	...	...	361	3	5	
Colonial Government on loan	...	...	...	...	...	...	...	38,983	16	1	Compensation	...	...	...	...	...	...	10,734	15	0	
Surcharges recovered	...	...	...	...	...	...	...	3	0	0	Law Expenses	...	...	...	...	...	...	516	6	9	
Miscellaneous	...	...	...	...	...	...	...	49	6	0	Cartage of Bricks, Wages, and Tolls	...	...	...	...	...	...	136	10	8	
											Interest	...	...	...	...	...	...	875	5	8	
Total Amount of Receipts								41,254	2	0	Total Amount of Expenditure								43,321	11	8

The above Amount for General Works is composed of the following items:—

Wages of Workmen	...	...	...	...	...	...	...	£	s.	d.
								1,011	7	4
Cartage and Wharfage	...	...	...	...	...	...	...	2,383	13	8
Cast Iron Pipes	...	...	...	...	...	...	...	25,074	12	9
Sundries and Fuel	...	...	...	...	...	...	...	474	4	8
Castings	...	...	...	...	...	...	...	46	12	6
								<u>£28,990 10 11</u>		

STATEMENT shewing the Sums appropriated and received on account of Sewerage and Water Works.

SEWERAGE.	VOTED.			RECEIVED.			WATER.	VOTED.			RECEIVED.		
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
1854 ... ..	33,675	0	0	10,000	0	0	1854... ..	43,576	0	0	10,000	0	0
1855 ... ..	95,750	0	0	95,750	0	0	1855... ..	43,011	0	0	27,380	0	0
1856 ... ..	35,000	0	0	58,675	0	0	1856... ..	20,000	0	0	69,207	0	0
	164,425	0	0	164,425	0	0		106,587	0	0	106,587	0	0

*N.B.*—Of the Sum received in 1856 on account of the Water Works, £25,843 5s. 8d. has been paid as compensation for Lands resumed at Botany, which Amount has still to be received in addition to the Sums appropriated.

City Commissioners' Office,  
Sydney, 12 December, 1856.

CHAS. H. WOOLCOTT,  
Secretary.



1856.

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NEW SOUTH WALES.

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# WATER PIPES.

(COST OF REMOVAL.)

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*Ordered by the Legislative Assembly to be Printed, 9 December, 1856.*

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RETURN to an *Order* of the Honorable the Legislative Assembly, dated  
8 November, 1856, for—

“(1.) The Cost of removing Cast Iron Water Pipes from Sydney  
“to various places between Sydney and Botany Bay.”

“(2.) The Cost incurred, or to be incurred, in again removing  
“such Pipes, or some of them, to other localities, in consequence  
“of the places in which they were first laid down having been  
“appointed for that purpose by mistake.”

---

## WATER PIPES.

RETURN shewing the Cost of removing Cast Iron Water Pipes from Sydney to various places between Sydney and Botany, and the Cost to be again incurred in removing the Pipes to the Line where they are intended to be permanently laid.

Amount due to Mr. Woods on account of 30-inch Mains removed from the Wharfs in Sydney to the Botany Road.

69 pipes, 31 cwt. each,	to $2\frac{3}{4}$ miles	at 13s. per ton	.....	£69 10 4
131 do. do.	$3\frac{1}{4}$ " "	13s. 9d. per ton..		139 11 11 $\frac{1}{2}$
168 do. do.	$3\frac{3}{4}$ " "	14s. 6d. per ton..		188 15 9 $\frac{1}{2}$
143 do. do.	$4\frac{1}{4}$ " "	15s. 3d. per ton..		169 0 2
242 do. do.	$5\frac{1}{4}$ " "	16s. per ton .....		300 1 7
227 do. do.	$5\frac{3}{4}$ " "	17s. 6d. per ton..		307 17 4 $\frac{1}{2}$
62 do. do.	$6\frac{1}{4}$ " "	18s. 3d. per ton..		87 13 10
				£1,262 11 0

The cost of removing the above pipes to their destination can only be given at present under estimate, and therefore I beg to state that I estimate the cost of their removal to their destination will not exceed (£500) five hundred pounds.

Amount due upon 1,100 Pipes left near the Chippendale Toll Bar for convenience during the clearance of the Wharfs, to be removed again by Mr. Woods under his original Contract:—

600 pipes, 31 cwt. each,	to $3\frac{1}{4}$ miles	at 13s. 9d. per ton .		£639 7 6
500 do. do.	$3\frac{3}{4}$ " "	14s. 6d. " "		561 17 6
				£1,201 5 0

The cost of removing these pipes will be:—

For lifting 260 at 2s. 6d. each	.....		£32 10 0	
Ditto 840 at 2s.	.....		84 0 0	
				£116 10 0

And (9d.) nine-pence for every half mile distance of cartage from their present position to their destination on the line laid down. I estimate that their cost will not exceed (£320) three hundred and twenty pounds.

EDWARD BELL, M. Inst. C. E.,  
City Engineer.

*Sydney, 4 December, 1856.*

Transmitted in letter to Colonial Secretary, of date 5 December, 1856.

CHAS. H. WOOLCOTT,  
Secretary.

*City Commissioners' Office,  
Sydney, 5 December, 1856*



1857.

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NEW SOUTH WALES.

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## HAYMARKET, PARRAMATTA STREET.

(PAPERS RELATIVE TO LEASE OF.)

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*Ordered by the Legislative Assembly to be Printed, 17 March, 1857.*

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RETURN to an *Order* of the Honorable the Legislative Assembly of  
New South Wales, dated 3 March, 1857, for,—

“ 1. A Return of all Correspondence that may have taken place  
“ between the City Commissioners and any other parties, relative  
“ to any Lease or Contract for any lease of the Haymarket,  
“ Parramatta-street, with the particulars of such Lease or  
“ Contract.

“ 2. A Return of all expenses incidental to the enclosures and  
“ alterations that have taken place in the said Haymarket prior  
“ to such Lease.”

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## HAYMARKET, PARRAMATTA STREET.

THE CITY COMMISSIONERS to THE COLONIAL SECRETARY.

*City Commissioners' Office,*

*Sydney, 13 March, 1857.*

SIR,

In accordance with the instructions conveyed in your letter of the 6th instant, I have the honor, by direction of the City Commissioners, to transmit herewith, for the information of the Legislative Assembly,—

“(1) A Return of all Correspondence which has taken place between the Commissioners and any other parties, relative to any lease or contract for any lease of the Haymarket, Parramatta-street, with the particulars of such lease or contract.

“(2.) A Return of all expenses incidental to the enclosures and alterations that have taken place in the said Haymarket, prior to such lease.”

2. In transmitting these documents, I am desired by the City Commissioners to explain, that owing to the very small amount received during the past year for the rent of stalls in the Market Shed, it was deemed advisable to offer the lease of the building for sale with the rest of the City properties at the beginning of the present year, and it was at the same time stated that the lessee would be permitted to occupy a portion of the building as a store, but that possession of the same would be required to be given up, upon application being made by any party or parties desirous of occupying stalls for the sale of garden produce, &c. The present lessee has entered into a bond agreeing to immediately relinquish possession should he be so required at any time during the term of his lease, so that the use to which the building is at present applied is a matter of temporary accommodation only, any citizen having a right to possession of a stall upon intimating such a wish to the Commissioners. As the object which the City Commissioners had in view in enclosing the Shed and dividing it into stalls, namely, that of affording market accommodation to the residents in the southern portion of the City, had been found unsuccessful, it seemed advisable that some other arrangement should be made to obtain an increased return for the outlay incurred in the alterations to the building.

I have, &c.,

CHAS. H. WOOLCOTT,

Secretary.

THE HONORABLE

THE COLONIAL SECRETARY.

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*RETURN of all Correspondence between the City Commissioners and other parties relative to any Lease or Contract for any Lease of the Campbell-street Market Shed, with the particulars of such Lease or Contract; and also of all expenses incidental to the enclosures and alterations that have taken place in the said Market prior to such Lease.*

*Sydney, 29 December, 1856.*

GENTLEMEN,

I respectfully beg to explain what alterations I purpose, with your permission, to make in the Lower George-street Market :—To open the north gate and partition off about four stalls for the sale of corn, hay, bacon and butter, &c. ; the remainder I will leave as stalls for public use. This alteration, I beg to assure you, will much improve it in appearance, utility, and value, and I further assure you I will spare no exertion as to its cleanliness and good order.

I remain, &c.,

CAVAN BYRNE.

The City Commissioners.

*City Commissioners' Office,  
Sydney, 5 January, 1857.*

SIR,

In reply to your letter of the 29th ultimo, stating your intention to make certain alterations to the Campbell-street Market Shed, I am directed by the City Commissioners to inform you that they have no objection to your opening a gateway at the northern end, and partitioning off with an open fence four stalls at the southern end of the shed, for the sale of hay, corn, &c., such stalls, however, to be again thrown open for the public accommodation, should it be found necessary during the term of your lease.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

Mr. Cavan Byrne,  
1, Campbell-street.

*Sydney, 8 January, 1857.*

GENTLEMEN,

In perusing your letter of date 5th instant, stating what privilege I might have in opening the Campbell-street Market, by putting up an open fence at the southern end of the shed, and opening the part or doorway next to Campbell-street; if it were my wish to open the southern end as a general stores, &c., I need not open the Campbell-street end, as the gateway that is now open would do if I were to take that end, so if it is your intention to let me have it according to my proposals I am at readiness at any time you may think proper, as it is losing time and money.

I remain, &c.,

CAVAN BYRNE.

The City Commissioners.

*City Commissioners' Office,  
Sydney, 15 January, 1857.*

SIR,

I have to inform you, that in accordance with your request, as expressed in your letter of the 8th instant, the City Commissioners have granted you permission to erect a temporary fence at the southern end of the Campbell-street Market, on the understanding that the same be removed should the public at any time wish to resume the stalls in the Market.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

Mr. Cavan Byrne.

*Sydney, 22 January, 1857.*

GENTLEMEN COMMISSIONERS,

As your proposals to me of date 15th January, 1857, do not agree according to my wishes concerning the Haymarket Shed, I have now arranged with Mr. Terry, grocer, of Brickfield Hill, to become the leaseholder in my stead; by so doing you will much oblige,

Your obedient Servant,

CAVAN BYRNE.

*City Commissioners' Office,  
Sydney, 24 January, 1857.*

SIR,

The present lessee of the Campbell-street Market Shed having requested that the lease may be transferred to you for the remainder of the year, I have to inform you that the City Commissioners have agreed to such an arrangement, and request that you will submit, for the approval of the Commissioners, the name of some party willing to become surety for the due fulfilment of the terms of the said lease.

I have, &c.,

CHAS. H. WOOLCOTT,  
Secretary.

Mr. Terry,  
Grocer,  
Brickfield Hill.

*422, George-street, Sydney,  
28 January, 1857.*

GENTLEMEN,

According to your request made to me to name the party who is willing to become surety for the due fulfilment of the terms of the lease of the Campbell-street Market, I beg to submit to you Mr. John McMah, of 418, George-street, Sydney.

I have, &c.,

WILLIAM TERRY.

The City Commissioners.

ARTICLES

### Articles and Conditions

Of a Lease by Public Auction at the George-street Markets, in the City of Sydney, and Colony of New South Wales, on Monday the twenty-second day of December, eighteen hundred and fifty-six, at 12 o'clock noon, precisely, by the Commissioners of the said City, of the undermentioned Properties, and the Tolls and Dues arising therefrom, for the term or period of Twelve Calendar Months next after and commencing the first of January, eighteen hundred and fifty-seven.

GEORGE-STREET MARKETS,  
(exclusive of Stall Rents)  
HAY, CORN, & CATTLE MARKETS.

MARKET WHARF,  
(in Lots.)  
SOUTH HEAD ROAD FOUNTAIN.

#### General Conditions of Lease for all the Properties.

1st. The highest bidder shall be the Lessee; but if any dispute shall arise between the bidders, or between the sellers and bidders, then the property concerning which such dispute shall occur, shall be put up again at the amount of the last undisputed bidding previous to that at which the same had been knocked down.

2nd. The Lessee shall be subject to all Rules, Provisions, Resolutions, Regulations, and Bye-Laws of the said Commissioners, which now are or hereafter may be in force for the government of the property above mentioned.

3rd. The Lessee and his approved sureties shall within seven days from the day of letting, enter into a bond in half the amount of the rent, in security for the regular payment thereof, and for the due performance and observance of the foregoing and following conditions, and of all and every the Rules, Provisions, Resolutions, Regulations, and Bye-Laws of the said Commissioners for regulating the said property.

4th. The rent shall be paid in equal monthly instalments, in advance; the first month's payment to be paid into the hands of the Treasurer immediately on the fall of the hammer, and each succeeding month's rent to be paid in advance to the City Treasurer, at his office in Sydney.

5th. Within three days from the day of letting, the Lessees shall give or offer for the approval of the said Commissioners, the names of two sureties, which shall be made under the hands of the persons named therein, offering themselves as sureties for such Lessees.

6th. The Lessees shall not be at liberty to sub-let the said property, or the collection of Tolls and Dues arising therefrom to any person whomsoever, without having previously obtained the consent, in writing, of the said Commissioners; and in the event of the said property being so sub-let, the Lessees and their sureties shall remain equally responsible for the regular payment of the rent, and the fulfilment of the other obligations detailed in these conditions as if such sub-lease had not taken place.

7th. The Lessees shall be accountable for the proper conduct of the respective collectors and servants who may be employed by them.

8th. If the Lessee or Lessees of the said property, or his or their sureties, shall, for seven days next after the day of letting, neglect or refuse to comply with the Articles and Conditions of Lease in any respect, or to execute the bond required by these Articles to be entered into and executed by such Lessee or Lessees, and his or their sureties, or shall for seven days after the first day of any succeeding month of the year One Thousand Eight hundred and Fifty-seven, neglect or refuse to pay the monthly instalment of rent in advance, or to comply with the said Articles and Conditions of Sale, the property concerning which such default, neglect, or refusal shall occur, shall be let by public auction, after notice in one or other of the public journals; and the said Lessee or Lessees so making default, and his or their sureties shall be liable for all loss or damage which may be incurred by or through such re-letting, and all costs, charges, and expenses incurred or occasioned thereby, and the amount of the same shall be recovered by the said Commissioners by action at law; but in case there shall be any advance in the price offered for the said property on such re-sale, the same shall not belong to the person so making default as aforesaid, but to the Commissioners, for the benefit of the City.

9th. Persons having affixed their signature to these conditions, in token of their having become Lessees, or sureties for Lessees, of any of the above-mentioned properties, will be held to have previously obtained all necessary information, and not entitled to allege ignorance or any other cause for their not fulfilling all and every obligation incumbent on them by these conditions or under the Rules, Provisions, Resolutions, Regulations, and Bye-Laws of the said Commissioners, now in force, or to be from time to time made.

#### Special Conditions.

##### MARKETS.

The Commissioners reserve to themselves the power of making such alterations to any of the Market Buildings as they may deem necessary.

##### HAY, CORN, AND CATTLE MARKET.

The Lessee shall be bound to keep the Weigh Bridges in a good and efficient state of repair, and shall allow the Commissioners the free use of the same during the term of the Lease.

##### MARKET WHARF.

The Commissioners reserve to themselves the power of landing any blue stone metal or other articles, for City purposes, on any part of the said Wharf, free of charge; and also of extending any portion of the water-frontage into deep water, filling up the same, or making

making such other alterations as to them shall seem meet, and of quarrying rock thereon, free of charge. The Lessee shall also give up possession of such portion or portions of the said Wharf as the Commissioners may deem it desirable to resume, upon receiving one month's notice in writing from the Secretary to that effect. Provided always that the Lessee of the portion that may be so resumed may at his option give up the lease of the entire lot for the remainder of the year.

#### FOUNTAIN ON THE SOUTH HEAD ROAD.

The Lessee to keep the fountain in good repair, and prevent any waste of water therefrom during the term of lease, and to keep the same open from 6 a.m. until 6 p.m. on all lawful days. The Lessee shall not refuse a supply of water to any party or family who may agree to the terms fixed by the Commissioners for such supply; and all disputes respecting the number of rooms in any house or premises, &c., shall be referred for the final decision of the Commissioners. The Lessee shall not allow any water-cart employed in the sale of water in the City to receive a supply from the fountain: and the Commissioners shall have the power of stopping the supply to the fountain for a reasonable time, when and as often as they shall deem necessary.

*Adopted by the Commissioners for the  
City of Sydney, this 28th day of  
November, 1856.*

CHAS. H. WOOLCOTT,  
Secretary.

The Lessee will be permitted to make certain alterations in the said shed for the purpose of using a portion thereof as a General Grocery Store, but he will be required to immediately vacate such enclosure upon the application of any person or persons desirous of occupying stalls for the sale of garden produce, &c., in terms of the By-Laws regulating the said Markets.

*Signed this 2nd day of February, A.D. 1857,  
WILLIAM TERRY.*

Witness—

CHAS. H. WOOLCOTT.

#### *RETURN of all Expenses incidental to the Enclosure and Alterations that have taken place in the Hay Market prior to Lease for 1857.*

1854.					£	s.	d.
October	13.	Paid to J. Slade	...	...	500	0	0
"	20.	" J. Swan	...	...	40	0	0
November	3.	" J. Slade	...	...	200	0	0
"	"	" J. Swan	...	...	10	10	6
"	20.	" J. Slade	...	...	473	10	0
1855.							
February	17.	" J. Swan	...	...	14	12	4
Total Amount of Expenditure					...	...	£1,238 12 10

EDW. LORD,  
City Treasurer.

*City Treasurer's Office,  
Sydney, 12 March, 1857.*



1857.

NEW SOUTH WALES.

Legislative Assembly.

CITY COMMISSIONERS' DEPARTMENT.

# REPORT

FROM

THE SELECT COMMITTEE

ON

THE CITY COMMISSIONERS' DEPARTMENT;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

---

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

3 February, 1857.

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Sydney :

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,

PHILLIP-STREET.

1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

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VOTES No. 15. TUESDAY, 12 AUGUST, 1856.

3. City Commissioners' Department:—Mr. Martin moved, pursuant to notice,—
- (1.) That a Select Committee be appointed to inquire into, and report upon, the proceedings of the Commissioners for the City of Sydney from the period of their appointment.
- (2.) That such Committee consist of the following Members:—Mr. Cowper, Mr. Parkes, Mr. Campbell, Mr. Wilshire, Mr. Jones, Mr. Flood, Mr. Weekes, Mr. Gordon, Mr. Oakes, and Mr. Martin.
- Debate ensued.
- The Honorable the Colonial Secretary having required that the proposed Committee be appointed by ballot,—
- Question,—That a Select Committee be appointed to inquire into, and report upon, the proceedings of the Commissioners for the City of Sydney from the period of their appointment,—put and passed;—
- Whereupon the House proceeded to the ballot, and the Speaker declared the following Members to be the Committee duly appointed, viz.: Mr. Jones, Mr. Gordon, \*Mr. Hay, \*Mr. Parker, Mr. Scott, Mr. Lang, Mr. Oxley, Mr. Irving, †Mr. Plunkett, and Mr. Wilshire.
- 

VOTES No. 37. WEDNESDAY, 5 NOVEMBER, 1856.

17. City Commissioners' Department:—Mr. Jones moved, pursuant to *amended* notice, That Mr. Egan and Mr. Robertson be Members of the Select Committee on the City Commissioners' Department.
- Question put and passed.
- 

VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

2. City Commissioners' Department:—Mr. Jones, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee appointed, on the 12th August last, "to inquire into, and report upon, the proceedings of the Commissioners for the City of Sydney, from the period of their appointment";—
- And the Report being, by Order of the Speaker, read at length by the Clerk,—
- The same, together with the Evidence, ordered to be printed.
- 

REPORT

\* Seats declared vacant, 3 October, 1856.

† Seat declared vacant, 27 January, 1857.



1857.

## CITY COMMISSIONERS' DEPARTMENT.

## REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 12th August last "to inquire into, and report upon, the proceedings of the Commissioners for the City of Sydney from the period of their appointment"—have agreed to the following Report:—

Owing to the Ministerial changes which took place soon after the appointment of your Committee, and the adjournments of the House consequent thereon, the inquiry with which the Committee was charged was not entered upon until the 13th November. This delay in opening the inquiry has prevented your Committee from reporting at an earlier period of the Session.

The witnesses examined by your Committee in the course of their proceedings have been—Mr. Elliott and Mr. Rae, two of the City Commissioners; Mr. Bell, the present City Engineer; Mr. Trickett, and Mr. Dawson, the two Engineers associated with Mr. Bell in the examination of the Sewerage Works directed by His Excellency the Governor General; Mr. Rider, the Engineer under whose direction the City Sewerage and Water Works were commenced, and conducted until January, 1856, and his assistant Engineer, Mr. Mais; and the Contractor for the Sewerage Works, Mr. Randle. It is upon the evidence given by these gentlemen that the conclusions at which your Committee have arrived, and which are embodied in this Report, are based.

## GENERAL CITY WORKS.

A considerable amount has been expended by the City Commissioners, from the period of their appointment to the close of last year, in the formation and repairs of streets, in repairing and improving the wharfs and market buildings, and in other City improvements; and your Committee have reason to believe that this expenditure has been conducted, generally, in a satisfactory manner.

Besides the general works of the City, two other works, both of great magnitude and importance, and involving a very large expenditure, were more especially entrusted to the management of the Commissioners. These were the construction of Sewers for the drainage of the City, and the formation of the additional works requisite for securing an ample supply of water for its inhabitants. It is in reference to these two works, and to the Sewerage more especially, that the proceedings of the Commissioners, and of their responsible officers, have been most called in question; and it is, therefore, to these that your Committee have chiefly directed their attention.

## THE SEWERAGE WORKS.

Mr. Rider was appointed by the Commissioners as their Chief Engineer, to design the City Sewers, and to take charge of their construction. The testimonials submitted to the Commissioners by Mr. Rider, at the time of his appointment, although satisfactory as to his competency as a Railway Engineer, did not indicate that he had had any experience in the construction of Sewerage or Water Works. But the Commissioners state that a careful comparison of the testimonials submitted by the gentlemen who were then candidates for the office, led them to the conclusion that Mr. Rider was the best qualified for the appointment.

Under

Under the instructions of the Commissioners, Mr. Rider at once took steps for proceeding with the Sewerage Works. Having made such preliminary surveys and inquiries, and prepared such plans, as to him appeared sufficient, tenders were called for, for the construction of Sewers to drain that portion of the city included in section No. 1, bounded by Macquarie-street on the east, by Pitt-street on the west, by Bathurst-street on the south, and, taking in Bridge-street, extending nearly to Fort Macquarie. Four persons sent in tenders, viz., Mr. Farrelly, Mr. Randle, Mr. Murphy, and Mr. Inder. These tenders were referred for the analysis and report of Mr. Rider; and, under his advice, the Commissioners accepted Mr. Randle's tender. That gentleman accordingly entered upon the construction of the Sewers in section No. 1, and his contract is now nearly completed.

From the testimony of all the professional witnesses examined, your Committee are led to believe that the Sewerage works in section No. 1—as regards the levels, gradients, and size of the Sewers—are well designed to secure the effectual drainage of the portion of the City included in that section. But this evidence has further led them to the conclusion that the capacity of these Sewers, with an enlargement of the short Sewer in Bridge-street, will be quite ample to carry off also the drainage of the portion of the City extending westward from George-street to Clarence-street, and included within the same natural watershed as section No. 1, and so render unnecessary the Sewer down George-street which Mr. Rider contemplated, and the construction of which, it is estimated, would have cost about £52,000, besides seriously interfering with the large traffic in that street, and with the interests and the convenience of the residents of the chief business thoroughfare of the City. It is due to the Commissioners to state, that Mr. Elliott first drew the attention of the present City Engineer to the expediency and the practicability of making this change from the plan contemplated by Mr. Rider.

After a careful inquiry respecting Mr. Rider's preliminary proceedings before tenders for the works in section No. 1 were called for—as to his analysis of those tenders—his estimate of the probable cost of the works under the tender which he advised the Commissioners to accept—and the mode in which he directed those works to be carried out—and after an anxious consideration of the evidence submitted to them on these points, your Committee have come to the conclusion that Mr. Rider's conduct has been most unsatisfactory; that he has been careless and unfaithful in the performance of his duty; and that his unfaithfulness, and the misplaced trust reposed in him by the Commissioners, have led to an excessive and improper expenditure of the public money in the construction of the Sewers.

Your Committee are of opinion that Mr. Rider was not justified in entering upon the Sewerage Works in section No. 1, before he had made himself acquainted, by actual examination, with the character of the ground through which the Sewers were to pass; that until he had done this, he was not qualified to form a reliable opinion as to the real nature of the work to be done, or as to its probable cost; and was incapable of making an accurate analysis of any tenders which might be sent in, or of correctly deciding which of such tenders it would be best for the Commissioners, with a view to the public interests, to accept. The opinions of your Committee on these points are fully warranted by the results which have followed Mr. Rider's neglect of this necessary preliminary step, and to which they will presently draw the attention of your Honorable House; and they can also point to the evidence of the present City Engineer, Mr. Bell, in corroboration of the correctness of their views.

Mr. Rider, in the calculations on which he based his own estimates of the probable cost of the Sewers in section No. 1, and on which also his analysis of the various Tenders was based, estimated that there would be (omitting the short Sewer in Bridge-street) 12,758

lineal

lineal feet of rock to go through, and 7,424 feet of soil. Up to the 27th October last, the cutting, including Bridge-street, had been about 17,870 feet through rock, and (reckoning the mixed ground as half and half) 3,320 feet through soil. He also estimated that the only tunnelling would be 1,320 feet, in the main Sewer, and that all the rest of the work would be by open cutting. Up to the end of December, 1855—when he may be said to have given up charge of the Works—there had been upwards of 14,000 feet of tunnelling; the open cutting, up to the same time, bearing but a very small proportion to that quantity. Again, his own estimate of the probable cost of the Works (omitting the Sewer in Bridge-street) was £65,490; and under Mr. Randle's tender, of which he advised the acceptance, he computed the cost at £54,870. The actual cost under that tender (including about £1,000 for the Sewer in Bridge-street) will be £119,422.

The disparities here pointed out between Mr. Rider's estimates and actual results will, your Committee conceive, fully bear them out in asserting that the estimates submitted by him to the Commissioners were valueless, and could be of no real use to them in ascertaining the probable cost of the Sewers.

And, as affecting the acceptance of the most eligible tender, Mr. Rider's analysis, based on those estimates, could only serve to mislead the Commissioners. With a statement before them that the Sewers were to be almost entirely open cut, the Commissioners would have little difficulty in arriving at the conclusion that Mr. Randle's was the most advantageous tender. If, on the other hand, they had been informed—as Mr. Rider most unquestionably ought to have been in a position to inform them—that tunnelling was to be the rule, and open cutting the exception, they could have had as little difficulty in deciding that either of the other tenders would have been more advantageous than Mr. Randle's. For the Works, as estimated by Mr. Rider, Mr. Randle's tender was the best; for the Works as actually carried out under Mr. Rider's direction, the acceptance of Mr. Murphy's tender would have led to a saving of some thousands of pounds in the construction of the Sewers. Mr. Farrelly's tender was even much lower in some respects than Mr. Murphy's; but, as some doubts have been expressed whether that tender could have been carried out, your Committee have taken Mr. Murphy's for the purpose of comparison.

In carrying out the Works, Mr. Rider's conduct is in several respects open to censure. He failed to have prepared a progress plan, which experience has shown to be highly necessary, and the timely preparation of which would have better enabled the Commissioners to understand, at any time, the condition in which the Works actually stood, and so to have discovered and checked errors in direction and in measurement. His general supervision of the Works, and of the officers under him, appears to have been exceedingly loose; and his arrangements, as to the plans and papers in his office, very unbusiness-like.

But the gravest error committed by Mr. Rider, in carrying out the Sewerage Works, was in regard to tunnelling. The three Engineers appointed by the Governor General to examine the Sewerage Works all concur in opinion that open cutting is preferable to tunnelling to secure sound work; that it admits of the work being done quicker as well as better; that where the cutting does not exceed from 15 to 16 feet in depth it is much cheaper than tunnelling; that in the Mother Country, and in large towns there, open cutting, to a greater depth than this, is the rule, and tunnelling the exception; and that in carrying on the Sewers, in Section No. 1, tunnelling has in several places been resorted to where open cutting should have been adopted. Your Committee examined Mr. Bell, as being the most thoroughly acquainted with the works, more specifically on this last point, and at their request

he prepared a Return, which will be found appended to his Evidence, shewing that in every Sewer tunnelling had been unnecessarily and improperly resorted to, and that the excess of Expenditure from this cause amounts to the large sum of £21,211. Mr. Bell states that, in making up this Return, he only took those parts where he had not the slightest doubt the work should have been done by open cutting.

The evidence taken by your Committee further shews that most gross misconduct was manifested by the Assistant Engineer, Mr. Mais, in his fortnightly measurements of the work during Mr. Rider's direction. It was an important part of Mr. Mais's duty to measure the work every fortnight, and to prepare a certificate for the guidance of the Commissioners in making their payments to the Contractor on account. In these certificates there have been discovered errors of serious amount and of inexcusable character, and in some instances these errors have been repeated in several successive certificates. In the case of Macquarie-street, especially, there was on all the chief items an excess of work certified for, amounting in the aggregate, in the certificate of the 25th October, as compared with Mr. Bell's corrected Abstract of the 31st March, 1856, to a sum of £3,461; and in this amount there is no allowance made for any items of additional work executed between those dates, or for a further excess in the charge for brick work, of £280, subsequently discovered. In Pitt-street, also, there were serious errors in the quantity of driving in rock certified for. The attention of the Commissioners having been forcibly drawn to these erroneous measurements by the inquiries instituted by the late Legislature, your Committee have reason to believe that, after much difficulty and trouble, they have been ultimately corrected. But this in no degree exonerates Mr. Mais from blame for his unjustifiable neglect in the discharge of this portion of his duty. And as Mr. Rider always countersigned Mr. Mais's certificates, he is also highly blameable; for he ought either to have satisfied himself of the correctness of his assistant's measurements, or have declined to sign the certificates. Before passing from this subject, your Committee cannot refrain from expressing their surprise that Mr. Mais should have been continued in the employ of the City Commissioners, with a charge of this nature pending against him—a charge which is now admitted to be true—and that when he quitted their employ he should have been forthwith engaged by another public department in the Colony—the Railway Commissioners.

As there appeared some grounds for believing that erroneous certificates, involving large over-payments, had been given in regard to the character of the ground through which the Sewers had been carried, your Committee directed their inquiries to this point. From the evidence taken, it appears that in January last the Commissioners called in a Mining Engineer, Mr. Plews, to re-examine the ground, and review the certificates of their own Engineers. The result of this was that some corrections were made in Pitt and Castlereagh-streets, and, after some dispute, agreed to by Mr. Randle, by which a reduction was effected, as compared with the charges previously certified to by Mr. Mais and Mr. Rider, of £1,088. Some further deductions, of moderate amounts, have since been insisted on by Mr. Bell; and your Committee believe that when these are complied with the errors of this character will have been equitably rectified.

Your Committee consider that the Commissioners themselves are not entitled to be exonerated from blame, for the grave mistakes and the mismanagement which took place while the Sewers were under Mr. Rider's direction, and for not having dispensed with his services, and those of Mr. Mais, at an earlier date. It may not be easy to draw the line clearly between a proper and an improper interference with professional men in carrying out engineering works. But your Committee think that the Commissioners did not sufficiently bear in mind,  
that

that whatever powers they might entrust to their Engineer *they* were responsible to the community, into whose service they had entered, for his faithful and judicious exercise of those powers; and that they were consequently bound to watch his proceedings with the most scrupulous vigilance, and were entitled to control them whenever they had fair reason to believe their interference necessary. It did not, your Committee conceive, require a professional education to appreciate the necessity for an actual examination of the ground before calling for tenders for the Sewers; and for their own justification, as well as for the protection of the public interests, the Commissioners should have required their Engineer to adopt this necessary preliminary. The Commissioners, relying on the correctness of their Engineer's estimates and analysis, were quite justified in accepting Mr. Randle's tender as the best. But when they found, as the works proceeded, that the tunnelling so inordinately exceeded their Engineer's statement of what it would be, and that the cost was so much in excess of his estimate, this ought to have been sufficient to have excited their distrust, and to have led to their interfering to prevent unnecessary tunnelling. They ought also to have insisted on the preparation of a progress plan. With this, they could have exercised a much more effective control over their officers and over the Contractor. And your Committee cannot but think that an ordinary business examination and comparison of the quantities and money amounts in Mr. Mais's fortnightly certificates, could hardly have failed to lead to the early discovery, by the Commissioners themselves, of the errors and inconsistencies in these certificates, and to steps being taken to ensure accurate measurements.

The Contractor has been called upon to make good certain defects in the rendering of the Sewers, in mis-driving the tunnels, and in one or two other respects of less moment. When these defects have been remedied, your Committee have reason to believe, that the Sewers in section No. 1 will be of a superior character—equal, in point of material and workmanship, to the best works of a like character in the Mother-Country.

#### THE WATER WORKS.

The new works for securing a further and ample supply of water for the City were also placed under the charge of Mr. Rider by the Commissioners. His proceedings in regard to these works appear to have been hasty and ill-considered; and if carried out would have led to an unprofitable expenditure of the public money. But little progress, however, had been made beyond contracting for pipes and ordering engines and a pump. A material error was committed in the order for the engines and pump, but, fortunately, this was discovered and rectified by the makers. Considerable changes have been made by Mr. Bell, in the plan of his predecessor, with a view to diminish the first cost of the works, and also the annual expense of furnishing the City with an adequate supply of water. The reasons given by Mr. Bell for making these changes appear to your Committee to justify the course he is about to adopt.

Your Committee, without in the slightest degree impeaching the character of the Commissioners as honorable men, wish to express their decided opinion that they were unfit for the duties for which they were appointed.

Your Committee feel that they would hardly be doing justice to the Commissioners, or to their present Engineer, Mr. Bell, if they closed their Report without acknowledging the willingness which has been shewn by these gentlemen to furnish to the Committee, unreservedly, all the information sought for.

*Legislative Assembly Chamber,  
30 January, 1857.*

R. JONES,  
Chairman.

PROCEEDINGS OF THE COMMITTEE.

FRIDAY, 15 AUGUST, 1856.

**Members Present:—**

Mr. Plunkett,		Mr. Irving,
Mr. Parker,		Mr. Gordon,
Mr. Scott,		Mr. Jones,
	Mr. Hay.	

Mr. Jones was called to the Chair.  
[Adjourned till Wednesday next, at Ten o'clock.]

WEDNESDAY, 20 AUGUST, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,		Mr. Oxley,
Mr. Parker,		Mr. Wilshire,
Mr. Hay,		Mr. Irving,
Mr. Gordon,		Mr. Plunkett,
	Mr. Lang.	

Committee deliberated as to the period from which their inquiry should commence, and as to the nature of that inquiry.

Motion made, and *Question*—"That Gilbert Elliott, Esq., Chief City Commissioner, be summoned before this Committee, as a witness, on Tuesday next, to be then examined in reference to the general proceedings of the Commissioners of the City of Sydney, from the period of their appointment."—*agreed to.*

[Adjourned till Tuesday next, at Ten o'clock.]

TUESDAY, 26 AUGUST, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Parker,		Mr. Lang,
Mr. Hay,		Mr. Irving,
	Mr. Wilshire.	

Committee deliberated.

Motion made (Mr. Parker), and *Question*—"That this Committee do not proceed to business this day."—*agreed to.*

Motion made, and *Question*—"That the Chief City Commissioner, Gilbert Elliott; Esq., now waiting to be examined, be informed that the Committee have resolved not to proceed to business this day, and that his examination will therefore not be entered upon until such future period as shall hereafter be decided upon by the Committee, and of which he will be duly apprised."—*agreed to.*

After further deliberation—

Motion made (Mr. Parker), and *Question*—"That this Committee do now adjourn *sine die.*"—*agreed to.*

Committee then adjourned.

FRIDAY, 31 OCTOBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,		Mr. Oxley,
	Mr. Lang.	

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last meeting of the Committee.

Committee then deliberated as to the actual purposes for which they were appointed, and as to whether, under the contemplated abolition of the City Commissioners' Department, any further proceeding with the inquiry was necessary.

Motion made (Mr. Scott), and *Question*—"That this Committee are of opinion that notwithstanding the Government have moved for the abolition of the City Commissioners' Department, it is advisable, both in justice to that Department and to the public generally, that this inquiry should be proceeded with."—*agreed to.*

Motion

Motion made (Mr. Lang) and Question—

“(1.) That as Mr. Parker and Mr. Hay, who are no longer Members of this Committee by reason of the vacation of their seats on acceptance of office under the Crown, will probably be prevented by the duties of office from devoting themselves so sedulously to this inquiry as its important nature renders absolutely requisite, it is expedient that two other Members should be appointed in their stead.

“(2.) That the Chairman be consequently requested to move, that Mr. Nichols and Mr. Flood be appointed Members of this Committee in the room of Mr. Parker and Mr. Hay”—*agreed to.*

Motion made and Question—“That the Chief City Commissioner, Mr. G. Elliott, be summoned before this Committee, as a witness, on Tuesday next.”—*agreed to.*  
[Adjourned till Tuesday next, at half-past Ten o'clock.]

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TUESDAY, 4 NOVEMBER, 1856.

By direction of the Chairman, the meeting of the Committee, appointed to be holden this day, was postponed until further notice.

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THURSDAY, 6 NOVEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.  
Mr. Plunkett, | Mr. Lang,  
Mr. Robertson.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last Meeting of the Committee.

Resolution of the House, appointing Mr. Robertson and Mr. Egan to be Members of the Committee in the room of Mr. Parker and Mr. Hay, read.

Committee deliberated.

Motion made (Mr. Plunkett) and Question—“That it is expedient to convene a full Meeting of this Committee at the earliest possible opportunity, to reconsider the Resolution agreed to at its last Meeting, relative to the advisability of proceeding with this inquiry, and to determine in the event of its proceeding being finally resolved on, as to whether the nature of the inquiry should be general or limited in its operation”—*agreed to.*

Mr. G. Elliott, Chief City Commissioner, who was in attendance as a witness, was then called in and informed by the Chairman, that it having been decided to convene a full Meeting of the Committee, for the purpose of determining certain matters having reference to their present position under the proposed abolition of the City Commissioners' Department, his examination was further postponed, until the opinion of the Committee with respect to these matters had been clearly ascertained.

[Adjourned till Tuesday next, at Ten o'clock.]

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TUESDAY, 11 NOVEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.  
Mr. Wilshire, | Mr. Scott,  
Mr. Egan, | Mr. Lang,  
Mr. Gordon, | Mr. Robertson,  
Mr. Plunkett.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last Meeting of the Committee.

The Chairman stated that the object for which the Committee was specially called together this day, was to reconsider at a full Meeting, a former Resolution agreed to by the Committee, on motion of Mr. Scott, relative to the advisability of proceeding with this inquiry.

Resolution agreed to by Committee, on motion of Mr. Scott, on 31st ultimo, read.  
Committee deliberated.

Motion made (Mr. Wilshire), and Question—“That in the opinion of this Committee, the Resolution agreed to on Friday the 31st ultimo, on motion of Mr. Scott, should be adhered to.”

Amendment proposed (Mr. Robertson)—“That the Question be amended, by the omission of all the words after the word ‘That,’ at the commencement, with a view to insert the words—‘Alterations so material have, consequent upon the proposed abolition of the City Commissioners' Department, taken place in the position of this Committee since its appointment, as to render it advisable to apply to the House for further instructions relative to the course which it would be now most expedient to pursue with reference to this inquiry,’ instead thereof.”

*Question put*—"That the words proposed to be omitted stand part of the Question."  
Committee divided.

Ayes, 4.		Noes, 3.
Mr. Wilshire,		Mr. Plunkett,
Mr. Egan,		Mr. Robertson,
Mr. Gordon,		Mr. Lang.
Mr. Scott.		

Whereupon Original Question put and agreed to.

Motion made, and *Question*—"That G. Elliott, Esq., Chief City Commissioner, be  
"summoned before this Committee, as a witness, on Thursday next"—*agreed to*.  
[Adjourned till Thursday next, at half-past Ten o'clock.]

THURSDAY, 13 NOVEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Oxley,		Mr. Egan,
Mr. Irving,		Mr. Wilshire,
Mr. Plunkett,		Mr. Scott,
Mr. Lang,		Mr. Robertson.

Mr. G. Elliott, Chief City Commissioner, examined.

[Adjourned till Tuesday next, at half-past Ten o'clock.]

TUESDAY, 18 NOVEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Lang,		Mr. Gordon,
Mr. Scott,		Mr. Robertson,
Mr. Plunkett,		Mr. Oxley,
Mr. Wilshire,		Mr. Egan.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous Meetings of the Committee.

Proofs of the *unrevised* transcript of the evidence of Mr. G. Elliott, as taken at his examination on Thursday last, were laid before the Committee.

Committee deliberated as to the expediency of transmitting the evidence taken before this Committee to the several witnesses for correction, and *Resolved* :—

"That in every case wherein it was determined to transmit the evidence to a witness for his revision, such witness be distinctly directed, in the letter forwarding his evidence, that he is not at liberty to make any alterations or corrections therein except verbal or grammatical ones, and that *these*, moreover, must be made on the margin, so as to avoid obliterating any portion of the original; and that should such witness desire to make any alterations or corrections in the substance of his evidence, he must do so by re-examination before the Committee."

At the request of Mr. Plunkett, a Member of the Committee, the Chairman directed the Clerk to produce the form of letter generally made use of in the transmission of the Minutes of Evidence to witnesses for correction, and certain alterations having been made therein, so as to adapt it more closely to the foregoing Resolution of the Committee, it was *Resolved* :—

"That the form, as amended, should be hereafter used in transmitting the evidence for correction to witnesses examined before this Committee, each witness at the same time being informed by the Chairman, at the close of his examination, of the tenor of the Resolution with reference to the revision of evidence, as above agreed to by the Committee."

Committee then deliberated as to the mode of conducting the examination of witnesses by its various members, after the examination-in-chief by the Chairman was concluded.

Mr. G. Elliott, Chief City Commissioner, further examined.

Motion made, and *Question*—"That John Rae, Esq., City Commissioner, be  
"summoned before this Committee, as a witness, on Friday next"—*agreed to*.  
[Adjourned till Friday next, at half-past Ten o'clock.]

FRIDAY, 21 NOVEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Oxley,		Mr. Gordon,
Mr. Scott,		Mr. Robertson,
Mr. Plunkett,		Mr. Lang,
	Mr. Egan.	

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last Meeting of the Committee.

Mr. J. Rae, City Commissioner, examined.

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The Chairman, at the request of the Clerk, brought under the notice of the Committee an explanatory statement, which had been appended by Mr. *G. Elliott* to the evidence given by him on the 18th instant, and desired the opinion of the Committee as to whether it would be the most expedient course to permit this statement to be printed at the end of his evidence, or recall Mr. *Elliott*, who was then in attendance, and thus enable him to give, as a verbal explanation, the substance of what he had here stated in writing.

Committee deliberated, and *Resolved* :—

“ That Mr. *G. Elliott* be forthwith called in, for the purpose of enabling him to make any *visd voce* statement, explanatory of his former evidence, he may deem necessary ;”—

Whereupon Mr. *G. Elliott* was called in and examined, in explanation of his evidence.

Motion made, and *Question*—“ That *J. Rae*, Esq., be again summoned before this Committee, as a witness, on Wednesday next ”—*agreed to*.

[Adjourned till Wednesday next, at half-past Ten o'clock.]

WEDNESDAY, 26 NOVEMBER, 1856.

**Members Present :—**

Richard Jones, Esquire, in the Chair.

Mr. Wilshire,		Mr. Gordon,
Mr. Scott,		Mr. Egan,
Mr. Plunkett,		Mr. Robertson,
	Mr. Lang.	

Mr. *J. Rae* further examined.

Motion made, and *Question*—“ That *J. Rae*, Esq., be again summoned before this Committee, as a witness, on Friday next ”—*agreed to*.

[Adjourned till Friday next, at half-past Ten o'clock.]

FRIDAY, 28 NOVEMBER, 1856.

**Members Present :—**

Richard Jones, Esquire, in the Chair.

Mr. Robertson,		Mr. Scott,
Mr. Plunkett,		Mr. Gordon.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous Meetings of the Committee.

Mr. *J. Rae* further examined.

Motion made, and *Question*—“ That *Edward Bell*, Esq., City Engineer, be summoned before this Committee, as a witness, on Wednesday next ”—*agreed to*.

[Adjourned till Wednesday next, at half-past Ten o'clock.]

WEDNESDAY, 3 DECEMBER, 1856.

**Members Present :—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,		Mr. Egan,
Mr. Lang,		Mr. Oxley,
	Mr. Wilshire.	

Mr. *Edward Bell*, City Engineer, examined.

Motion made, and *Question*—“ That *Edward Bell*, Esq., be again summoned before this Committee, as a witness, on Friday next ”—*agreed to*.

[Adjourned till Friday next, at half-past Ten o'clock.]

FRIDAY, 5 DECEMBER, 1856.

**Members Present :—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,		Mr. Oxley,
Mr. Wilshire,		Mr. Plunkett,
Mr. Irving.		Mr. Gordon,
	Mr. Lang.	

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous Meetings of the Committee.

Mr. *G. Elliott* and Mr. *E. Bell* further examined.

Motion made, and *Question*—“ That *J. Trickett*, Esq., Superintendent of the Coining Department of the Royal Sydney Mint, and *A. Dawson*, Esq., Colonial Architect, be summoned before this Committee, as witnesses, on Wednesday next ”—*agreed to*.

[Adjourned till Wednesday next, at half-past Ten o'clock.]

WEDNESDAY,

WEDNESDAY, 10 DECEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Oxley,		Mr. Plunkett,
Mr. Scott,		Mr. Wilshire,
Mr. Lang,		Mr. Gordon.

Mr. *J. Trickett*, Superintendent of the Coining Department of the Royal Sydney Mint, and Mr. *A. Dawson*, Colonial Architect, examined.

Motion made, and *Question*—"That *W. B. Rider*, Esq., late City Engineer, be summoned before this Committee, as a witness, on Friday next"—*agreed to*.  
[Adjourned till Friday next, at half-past Ten o'clock.]

FRIDAY, 12 DECEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Oxley,		Mr. Robertson,
Mr. Scott,		Mr. Egan,
Mr. Wilshire,		Mr. Lang,
Mr. Gordon,		Mr. Plunkett.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous Meetings of the Committee.

Mr. *W. B. Rider*, late City Engineer, examined.

Motion made and *Question*—"That *W. B. Rider*, Esq., be again summoned before this Committee, as a witness, on Wednesday next"—*agreed to*.  
[Adjourned till Wednesday next, at half-past Ten o'clock.]

WEDNESDAY, 17 DECEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,		Mr. Plunkett,
Mr. Oxley,		Mr. Lang,
	Mr. Wilshire.	

Mr. *W. B. Rider*, further examined.

Motion made and *Question*—"That *W. Randle*, Esq., be summoned before his Committee as a witness, for Friday next"—*agreed to*.  
[Adjourned till Friday next, at half-past Ten o'clock.]

FRIDAY, 19 DECEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Oxley,		Mr. Lang,
Mr. Robertson,		Mr. Scott,
Mr. Plunkett,		Mr. Gordon.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous Meetings of the Committee.

Mr. *W. Randle*, examined.

[Adjourned till Wednesday, 31st December, at half-past Ten o'clock.]

WEDNESDAY, 31 DECEMBER, 1856.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Oxley,		Mr. Lang,
Mr. Plunkett,		Mr. Robertson.

Mr. *H. C. Mais*, late Assistant Engineer to the City Commissioners, examined.

Motion made and *Question*—"That *E. Bell*, Esq., be again summoned before this Committee, as a witness, on Tuesday next"—*agreed to*.  
[Adjourned till Tuesday next, at half-past Ten o'clock.]

TUESDAY,

TUESDAY, 6 JANUARY, 1857.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,  
Mr. Egan,  
Mr. Robertson,

Mr. Irving,  
Mr. Wilshire,  
Mr. Lang.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the two previous Meetings of the Committee.

Mr. *Edward Bell*, further examined.

Mr. *W. B. Rider*, examined in explanation of his evidence.

In the course of his examination the witness expressed a desire to put in a certain explanatory statement, drawn up by himself, with a view to its being printed with his evidence.

The Chairman thereupon directed the Clerk to read the statement; and the same was read by the Clerk accordingly.

Mr. *Rider's* examination continued.

At the close of his examination, Mr. *Rider* having, by the direction of the Chairman, withdrawn, Committee deliberated as to the advisability of printing the statement as requested, in its integrity; and the Chairman having pointed out that certain portions thereof aspersed and reflected strongly on the Report of the Select Committee appointed by the late Legislature to inquire into the City Commissioners' Department, and on the conduct of Mr. *Edwards*, late Resident Engineer, and Assistant to Mr. *William Randle*, who had not been examined by the Committee, read the same, and desired the opinion of the Committee as to the expediency of requesting Mr. *Rider* to strike out these portions, prior to determining whether the statement should be received and printed as a part of his evidence.

Committee deliberated, and having requested the Chairman to mark such portions of the statement as were objectionable—*Resolved* :—

“ That Mr. *W. B. Rider* be forthwith recalled, and apprised that the Committee “ considering the portions of the statement (marked by the Chairman at their request), “ aspersing and reflecting on the Committee appointed by the late Legislature, and on “ Mr. *Edwards*, to be objectionable, deem it expedient before ordering the printing of said “ statement, to request him to expunge these particular portions therefrom.”

Whereupon Mr. *Rider* having been recalled, and informed of the terms of the foregoing Resolution, acquiesced thereto, and struck out those portions marked as objectionable accordingly.

By direction of the Chairman, Mr. *Rider* then withdrew, and Committee ordered the statement, *as amended*, to be printed with his evidence. [*Vide Appendix A to Mr. Rider's Evidence of 6 January, 1857.*] Committee then deliberated as to whether any further evidence was required to complete the Inquiry, and were of opinion that further evidence was unnecessary.

Motion made (Mr. *Egan*) and Question—“ That the Chairman be requested to “ draft a series of Resolutions for the consideration of the Committee, which Resolutions “ should, if agreed to, form the basis of their Report, it being at the same time reserved to “ the discretion of any Member to submit for consideration such Resolutions as he himself “ may think fit to frame”—*agreed to.*

Committee then adjourned.

FRIDAY, 16 JANUARY 1857.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Robertson,  
Mr. Gordon,  
Mr. Egan,

Mr. Lang,  
Mr. Plunkett,  
Mr. Wilshire.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the last Meeting of the Committee.

The following Draft Resolutions, brought up by the Chairman, were read 1<sup>o</sup> :—

“ 1. That rather extensive works, for the formation and repair of streets, and for other City improvements, have been satisfactorily carried out under the direction of the City Commissioners.

“ 2. That the general plan of the City Sewerage Works, in section No. 1, as designed by Mr. *Rider*, the Engineer appointed by the Commissioners, as regards the levels and gradients, and the capacity of the sewers, appears to be well adapted for the purpose for which it is intended.

“ 3. That it appears to have been contemplated by Mr. *Rider* to drain the streets between George-street and the crest of the watershed to the west, by means of a sewer along George-street; but that this sewer was found, by the Board appointed by the Governor General to examine the works in section No. 1, to be unnecessary, as the size of the sewers in that section, with an enlargement of the one in Bridge-street, would be quite adequate to drain the whole of the area extending to Clarence-street on the west.

" 4. That the Sewerage Works in section No. 1 were not, in many respects, satisfactorily carried out by the Engineer first appointed.

" 5. That no sufficient preliminary examination was made by Mr. Rider, to acquaint himself with the real character of the ground through which the sewers were to be carried. That he was thus incapable of making an accurate approximate estimate of the probable cost of the works, or of drawing up a reliable analysis of the tenders sent in by the four persons who tendered for the contract.

" 6. That, as a consequence of this neglect, Mr. Rider's estimates—both of the character and the cost of the Works—have proved to be worthless;—that while he estimated all the work, except 1,320 feet, to be carried through rock and soil, by means of open cutting, more rock than he anticipated has been met with; and, under his management, the tunnelling, up to the 31st December, 1855, had extended to upwards of 12,000 feet, the open cutting bearing but a small proportion to this quantity; while the total cost of the works in section No. 1—estimated by him at £65,490, and under Mr. Randle's tender at £54,870—has actually amounted to the sum of £119,422.

" 7. That, from the same cause, Mr. Rider's analysis of the various tenders sent in to the Commissioners, was equally valueless; for while Mr. Randle's was the best, according to Mr. Rider's estimate of the probable work,—for the work, as actually executed, either Mr. Murphy's or Mr. Farrelly's would have been much more advantageous to the citizens.

" 8. That in carrying on the Works tunnelling has, in every sewer, been improperly resorted to, and a sum of £21,211 has been thus unnecessarily expended;—that open cutting is shewn to be cheaper than tunnelling, and to be, at the same time, more conducive to the sound construction of sewers, and to the speedy execution of the work.

" 9. That the fortnightly measurements of the work, for the purpose of certifying the amount which the Contractor was entitled to be paid on account, were conducted in a grossly careless and incorrect manner by Mr. Mais;—that, in regard to Macquarie-street, especially, errors of a grave character, on nearly all the chief items, were made, and continued for several successive certificates; and that, although Mr. Rider countersigned these certificates, he took no steps to satisfy himself of their correctness.

" 10. That while there have been some errors in Mr. Mais's certificates, in regard to the character of the ground through which the sewers have been carried, involving some over-payments on account, these errors have not been of any serious magnitude, and the steps taken by the Commissioners in respect to them have led to their being equitably rectified.

" 11. That the Commissioners are not entitled to be exonerated from blame for the grave mistakes and mismanagement which took place while the sewers were under Mr. Rider's direction. That the Committee believe that a proper and vigilant supervision of Mr. Rider's proceedings would have led to his being called on to make the necessary preliminary examination of the ground before entering on the Works;—would have caused, at least, a diminution in the quantity of unnecessary tunnelling, if not an entire prevention of it;—would have led to an early discovery of the errors committed by Mr. Mais in his fortnightly measurements;—and would have ensured a more faithful and business-like discharge of his duties by Mr. Rider, while in the employ of the Commissioners, or his earlier dismissal.

" 12. That, owing to the strictness and efficiency of the present City Engineer, Mr. Bell, the Contractor has been required to make good certain defects in the material and workmanship of the sewers; and the Committee believe that when Mr. Bell certifies to their completion, these sewers will bear a favourable comparison with the best works of a like character in the Mother Country.

" 13. That with regard to the new City Water Works, which were also originally under Mr. Rider's charge, his preliminary proceedings appear to have been marked by the same hasty looseness which he displayed in regard to the Sewerage Works; but that in this case, as but little progress had been made, the appointment of his successor took place in sufficient time to allow of the errors which had been committed being rectified, without any material cost to the citizens."

Motion made (*Mr. Lang*) and *Question*—"That these Resolutions be now read 2<sup>o</sup>"  
—agreed to.

Resolutions read 2<sup>o</sup> accordingly.

Committee deliberated as to the advisability of causing these Draft Resolutions to be printed, and circulated amongst the Members of the Committee, prior to proceeding to consider the same paragraph by paragraph; and a question arising as to the probability of the purport of the propositions made therein transpiring, or any copies thereof being circulated beyond the Members of the Committee, in the event of their being placed in the Government Printer's hands for printing, even should that officer be instructed to enjoin secrecy with respect to them, on the part of the person or persons to whom their printing was entrusted;—Committee directed the Clerk of Printing Branch to be called, and, on his presenting himself, requested his opinion on the matter then under deliberation; and he having stated, that it would in his opinion be in the power of the Government Printer to obviate any circulation of these Resolutions beyond the Members of the Committee, and to prevent any dissemination of the purport of the propositions therein set forth, by instructing that officer to place them in the hands of an individual for printing, on whose secrecy he could rely,—

Motion made (*Mr. Plunkett*) and *Question*—"That these Draft Resolutions be sent to the Government Printer, with instructions forthwith to strike off twelve copies thereof, Mr. Hanson being at the same time specially apprised, by the Clerk of Printing Branch, of the Committee's desire that proper steps be taken to prevent the issue of a single copy thereof"

“ thereof, beyond those now ordered to be struck off for distribution amongst the Members of the Committee themselves; and in order more effectually to ensure the end, and to obviate the dissemination of any of the propositions contained therein, that they be placed by him in the hands of some *individual* compositor, upon whose secrecy implicit reliance could be had”—*agreed to.*

[Adjourned till Wednesday next, at half-past Ten o'clock.]

WEDNESDAY, 21 JANUARY, 1857.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Plunkett,  
Mr. Lang,  
Mr. Egan,

Mr. Wilshire,  
Mr. Scott,  
Mr. Robertson,

Mr. Gordon.

Committee met for the further consideration of the Draft Resolutions, to form the basis of their Report, brought up by the Chairman.

Motion made (*Mr. Robertson*) and *Question*—“ That these Resolutions be now considered *seriatim*”—*agreed to.*

*First Resolution* read:—

“ 1. That rather extensive works, for the formation and repair of streets, and for other City improvements, have been satisfactorily carried out under the direction of the City Commissioners.”

Motion made (*Mr. Egan*) and *Question*—“ That this Resolution be amended by the insertion of the word ‘*generally*’ after the word ‘*been*’”—*agreed to.*

Word “*generally*” inserted accordingly.

Whereupon Committee *resolved*:—

“ That the purport of this Resolution, as amended, be embodied in the Report.”

*Second and Third Resolutions* read:—

“ 2. That the general plan of the City Sewerage Works, in section No. 1, as designed by Mr. Rider, the Engineer appointed by the Commissioners, as regards the levels and gradients, and the capacity of the sewers, appears to be well adapted for the purpose for which it is intended.”

“ 3. That it appears to have been contemplated by Mr. Rider to drain the streets between George-street and the crest of the watershed to the west, by means of a sewer along George-street; but that this sewer was found, by the Board appointed by the Governor General to examine the works in section No. 1, to be unnecessary, as the size of the sewers in that section, with an enlargement of the one in Bridge-street, would be quite adequate to drain the whole of the area extending to Clarence-street on the west.”

Whereupon Committee *resolved*:—

“ That the purport of these Resolutions be embodied in the Report.”

*Fourth Resolution* read:—

“ 4. That the Sewerage Works in section No. 1 were not, in many respects, satisfactorily carried out by the Engineer first appointed.”

Committee deliberated.

Motion made (*Mr. Scott*) and *Question*—“ That this Resolution be amended by the insertion of the word ‘*important*’ after the word ‘*many*’”—*agreed to.*

Word “*important*” inserted accordingly.

Whereupon Committee *resolved*:—

“ That the purport of this Resolution, as amended, be embodied in the Report.”

*Fifth and Sixth Resolutions* read:—

“ 5. That no sufficient preliminary examination was made by Mr. Rider, to acquaint himself with the real character of the ground through which the sewers were to be carried. That he was thus incapable of making an accurate approximate estimate of the probable cost of the works, or of drawing up a reliable analysis of the tenders sent in by the four persons who tendered for the contract.

“ 6. That, as a consequence of this neglect, Mr. Rider’s Estimate—both of the character and the cost of the Works—have proved to be worthless;—that while he estimated all the work, except 1,320 feet, to be carried through rock and soil, by means of open cutting, more rock than he anticipated has been met with; and, under his management, the tunnelling, up to the 31st December, 1855, had extended to upwards of 12,000 feet, the open cutting bearing but a small proportion to this quantity; while the total cost of the works in section No. 1—estimated by him at £65,490, and under Mr. Randle’s tender at £54,870—has actually amounted to the sum of £119,422.”

Whereupon Committee *resolved*:—“ That the purport of these Resolutions be embodied in the Report.”

*Seventh Resolution* read:—

“ 7. That, from the same cause, Mr. Rider’s analysis of the various tenders sent in to the Commissioners, was equally valueless; for while Mr. Randle’s was the best, according to Mr. Rider’s estimate of the probable work,—for the work as actually executed, either Mr. Murphy’s or Mr. Farrelly’s would have been much more advantageous to the citizens.”

Motion made (*Mr. Plunkett*) and *Question proposed*—“ That this Resolution be amended by the omission of the word ‘*either*,’ after the word ‘*executed*,’ and by the omission of the words ‘*or Mr. Farrelly’s*’ after the words ‘*Mr. Murphy’s*.’”

*Question*

Question put,—“That the words proposed to be omitted stand part of the Resolution.”  
Committee divided.

Ayes, 5.	Noes, 2.
Mr. Gordon, Mr. Scott, Mr. Robertson, Mr. Wilshire, Mr. Egan.	Mr. Plunkett, Mr. Lang.

Further motion made (*Mr. Plunkett*) and Question proposed—“That this Resolution be amended by the insertion of the words ‘*if carried out,*’ after the words ‘*or Mr. Farrelly’s*’”

Question put,—“That those words be there inserted.”  
Committee divided.

Ayes, 3.	Noes, 4.
Mr. Plunkett, Mr. Lang, Mr. Wilshire.	Mr. Egan, Mr. Scott, Mr. Robertson, Mr. Gordon.

Whereupon Committee resolved:—“That the purport of this Resolution be embodied in the Report.”

*Eighth* and *Ninth* Resolutions read:—

“8. That in carrying on the Works, tunnelling has, in every sewer, been improperly resorted to, and a sum of £21,211 has been thus unnecessarily expended;—that open cutting is shewn to be cheaper than tunnelling, and to be, at the same time, more conducive to the sound construction of the sewers, and to the speedy execution of the work.

“9. That the fortnightly measurements of the work, for the purpose of certifying the amount which the Contractor was entitled to be paid on account, were conducted in a grossly careless and incorrect manner by Mr. Mais;—that, in regard to Macquarie-street especially, errors of a grave character, on nearly all the chief items, were made, and continued for several successive certificates; and that, although Mr. Rider countersigned these certificates, he took no steps to satisfy himself of their correctness.”

Whereupon Committee resolved:—“That the purport of these Resolutions be embodied in the Report.”

*Tenth* Resolution read:—

“10. That while there have been some errors in Mr. Mais’ certificates, in regard to the character of the ground through which the sewers have been carried, involving some over payments on account, these errors have not been of any serious magnitude, and the steps taken by the Commissioners in respect to them have led to their being equitably rectified.”

Motion made (*Mr. Scott*) and Question—“That this Resolution be amended, after the words ‘*have been,*’ by the substitution of the word ‘*several*’ for the word ‘*some*’”—*agreed to.*

Further motion made (*Mr. Scott*) and Question proposed—“That this Resolution be further amended by the omission of the words ‘*taken by,*’ with a view to the insertion of the words ‘*forced on the attention of*’ instead thereof.”

Question put,—“That the words proposed to be omitted stand part of the Resolution.”  
Committee divided.

Ayes, 2.	Noes, 5.
Mr. Plunkett, Mr. Lang.	Mr. Scott, Mr. Gordon, Mr. Wilshire, Mr. Robertson, Mr. Egan.

Words “*taken by*” omitted accordingly,—

Whereupon Question—“That the words proposed to be inserted in place of the words omitted, be so inserted”—*agreed to.*

Words “*forced on the attention of*” inserted accordingly,—

Whereupon Committee resolved:—

“That the purport of this Resolution, as amended, be embodied in the Report.”

*Eleventh* Resolution read:—

“11. That the Commissioners are not entitled to be exonerated from blame for the grave mistakes and mismanagement which took place while the sewers were under Mr. Rider’s direction. That the Committee believe that a proper and vigilant supervision of Mr. Rider’s proceedings would have led to his being called on to make the necessary preliminary examination of the ground before entering on the works; would have caused, at least, a diminution in the quantity of unnecessary tunnelling, if not an entire prevention of it;—would have led to an early discovery of the errors committed by Mr. Mais in his fortnightly measurements;—and would have insured a more faithful and business-like discharge of his duties by Mr. Rider, while in the employ of the Commissioners, or his earlier dismissal.”

Motion made (*Mr. Lang*) and Question proposed—“That this Resolution be amended, after the words ‘*That the Commissioners*’ at the commencement, by the insertion of the words ‘*although they undertook their duties upon the understanding that as unprofessional men they were entitled to throw the whole—or nearly the whole—responsibility, as to the effectual execution of the Sewerage and other works, upon their Engineer.*’”

Committee

Committee deliberated.

*Question put*—"That those words be there inserted."

Committee divided.

Ayes, 2.	Noes, 5.
Mr. Lang,	Mr. Wilshire,
Mr. Plunkett.	Mr. Egan,
	Mr. Scott,
	Mr. Robertson,
	Mr. Gordon.

Further motion made (Mr. Lang) and *Question proposed*—"That this Resolution be amended after the words '*entitled to be*' and before the word '*exonerated*,' by the insertion of the word '*entirely*.'"

*Question put*—"That this word be there inserted."

Committee divided.

Ayes, 2.	Noes, 5.
Mr. Lang,	Mr. Egan,
Mr. Plunkett.	Mr. Scott,
	Mr. Robertson,
	Mr. Gordon,
	Mr. Wilshire.

Motion made (Mr. Scott) and *Question proposed*—"That this Resolution be amended after the words '*That the Committee believe that*,' by the insertion of the words '*the terms of the contract were negligently carried out, and that*.'"

*Question put*—"That those words be there inserted."

Committee divided.

Ayes, 4.	Noes, 3.
Mr. Scott,	Mr. Lang,
Mr. Gordon,	Mr. Wilshire,
Mr. Egan,	Mr. Plunkett.
Mr. Robertson.	

Words "*the terms of the contract were negligently carried out, and that*," inserted accordingly.

Further motion made (Mr. Scott) and *Question proposed*—"That this Resolution be further amended by the omission of the words '*a proper and vigilant*,' with a view to the insertion of the words '*the most ordinary*' instead thereof."

*Question put*—"That the words proposed to be omitted stand part of the Resolution."

Committee divided.

Ayes, 4.	Noes, 3.
Mr. Plunkett,	Mr. Scott,
Mr. Gordon,	Mr. Egan,
Mr. Lang,	Mr. Robertson.
Mr. Wilshire.	

Further motion made (Mr. Lang) and *Question proposed*—"That this Resolution be further amended by the omission of the words '*if not an entire prevention of it*.'"

Committee deliberated.

*Question put*—"That the words proposed to be omitted stand part of the Resolution."

Committee divided.

Ayes, 6.	Noes, 1.
Mr. Plunkett,	Mr. Lang.
Mr. Scott,	
Mr. Gordon,	
Mr. Wilshire,	
Mr. Robertson,	
Mr. Egan.	

Whereupon Committee resolved:—

"That the purport of this Resolution, as amended, be embodied in the Report."

*Twelfth Resolution read*:—

"12. That, owing to the strictness and efficiency of the present City Engineer, Mr. Bell, the contractor has been required to make good certain defects in the material and workmanship of the sewers; and the Committee believe that when Mr. Bell certifies to their completion, these sewers will bear a favourable comparison with the best works of a like character in the Mother Country."

Motion made (Mr. Gordon) and *Question proposed*—"That this Resolution be amended by the omission of the word '*strictness*' with a view to the insertion of the word '*vigilance*' instead thereof."

*Question put*—"That the word proposed to be omitted stand part of the Resolution."

Committee divided.

Ayes, 5.	Noes, 2.
Mr. Plunkett,	Mr. Gordon,
Mr. Wilshire,	Mr. Egan.
Mr. Robertson,	
Mr. Lang,	
Mr. Scott.	

Whereupon Committee resolved,—

"That the purport of this Resolution be embodied in the Report."

*Thirteenth Resolution read:—*

“ 13. That with regard to the new City Water Works, which were also originally under Mr. Rider's charge, his preliminary proceedings appear to have been marked by the same hasty looseness which he displayed in regard to the Sewerage Works; but that in this case, as but little progress had been made, the appointment of his successor took place in sufficient time to allow of the errors which had been committed being rectified, without any material cost to the citizens.”

Committee deliberated.

Motion made (Mr. Egan) and *Question put*—“ That this Resolution be expunged.”  
Committee divided.

Ayes, 1  
Mr. Egan.

Noes, 5.  
Mr. Robertson,  
Mr. Scott,  
Mr. Plunkett,  
Mr. Gordon,  
Mr. Lang.

Motion made (Mr. Scott) and *Question proposed*—“ That this Resolution be amended by the omission of the words ‘ *allow of the errors which had been committed being rectified without any material cost,*’ with a view to the insertion of the words ‘ *prevent serious loss*’ instead thereof.”

Committee deliberated.

*Question by leave withdrawn.*

Whereupon Committee *resolved:—*

“ That the purport of this Resolution be embodied in the Report.”

Motion made and *Question*—“ That this Committee in agreeing to the foregoing Resolutions do not desire to preclude the Chairman from introducing any fresh matter into his Draft Report, which a more complete examination of the evidence may lead him to consider necessary, providing such fresh matter be not inconsistent with these Resolutions,”  
—*agreed to.*

Committee then deliberated as to the expediency of inserting a paragraph in their Report expressive of their disapproval of the course pursued by the Railway Commissioners, in employing Mr. Mais in the Railway office prior to the receipt of any satisfactory explanation relative to that gentleman's removal from the City Commissioners' Department, and were generally of opinion that the insertion of such a paragraph should be left entirely to the discretion of the Chairman.

Motion made (Mr. Lang) and *Question proposed*—“ That in the opinion of this Committee, it is advisable to insert in the Report a paragraph commenting on the imputations of fraud and dishonesty, with which the City Commissioners and Mr. Randle have been from time to time aspersed.”

Committee deliberated; and being generally of opinion, that as no such accusations had been made against these gentlemen to them, and they were undesirous of instituting any inquiry into, or of supervising in any way the Proceedings of the Committee of the late Legislature, the insertion of any such paragraph would be inexpedient.

Whereupon *Question by leave withdrawn.*

Motion made (Mr. Robertson) and *Question*—“ That the Chairman be requested forthwith to draw up a Draft Report for the consideration of the Committee, embodying the purport of the foregoing Resolutions”—*agreed to.*

[Adjourned till Friday, 30th instant, at half-past Ten o'clock.]

FRIDAY, 30 JANUARY, 1857.

**Members Present:—**

Richard Jones, Esquire, in the Chair.

Mr. Scott,  
Mr. Robertson,

Mr. Lang,  
Mr. Egan,

Mr. Gordon.

The Chairman brought up and laid before the Committee his Draft Report.

Motion made (Mr. Robertson) and *Question*—“ That the Draft Report, proposed by the Chairman, be now read 1<sup>o</sup>”—*agreed to.*

Draft Report read 1<sup>o</sup> accordingly.

Motion made (Mr. Gordon) and *Question*—“ That the Report be now considered paragraph by paragraph”—*agreed to.*

Paragraphs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 read *seriatim*, and with certain *verbal* amendments *agreed to.*

*New* paragraph proposed (Mr. Robertson) read, as follows:—

“ Your Committee, without in the slightest degree impeaching the character of the Commissioners as honorable men, wish to express their decided opinion that they were unfit for the duties for which they were appointed.”

Committee deliberated.

Motion made (Mr. Robertson) and *Question*—“ That *this* paragraph be inserted in the Report immediately after paragraph 19, and thus stand paragraph 20 thereof”—*agreed to.*

Paragraph inserted accordingly.

Paragraph 20 of the Draft Report, now 21, then read and *agreed to.*

Whereupon Motion made, and *Question*—“ That this Report, as amended, be the Report of the Committee”—*agreed to.*

Chairman requested to Report to the House, together with the Minutes of Evidence.



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1856.

LEGISLATIVE ASSEMBLY.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

CITY COMMISSIONERS' DEPARTMENT.

WEDNESDAY, 13 NOVEMBER, 1856.

Present:—

- |             |               |                |
|-------------|---------------|----------------|
| MR. EGAN,   |               | MR. OXLEY,     |
| MR. IRVING, |               | MR. PLUNKETT,  |
| MR. JONES,  |               | MR. SCOTT,     |
| MR. LANG,   |               | MR. ROBERTSON, |
|             | MR. WILSHIRE. |                |

RICHARD JONES, Esq., IN THE CHAIR.

Gilbert Elliott, Esq., Chief Commissioner of the City of Sydney, called in and examined:—

1. *By the Chairman:* At what date did your appointment take place? I commenced my duties on the 1st of January, 1854.
2. Under what circumstances did your appointment take place,—what led to your appointment, and under what circumstances did you take charge of the City Works—was it consequent upon the abolition of the City Corporation? Yes.
3. What were the duties that devolved upon you in taking charge of the City Works? At that time the City Works generally.
4. What was the nature of those works at that time? The repairs of the streets, the kerbing and guttering, and, in fact, everything connected with the sanitary state of the City; I could hardly enumerate them.
5. There were, I presume, some arrangements for supplying the City with water at that time; and also some arrangements for the sewerage of the City? We commenced taking steps for sewerage and the supply of water almost immediately upon entering upon the duties of the office.
6. What arrangement did you find existing with reference to the staff for carrying on the City Works—for the management of the City Works generally? We made a change in the office of Secretary?
7. What arrangement did you find existing at the time—what officers, or efficient staff, had the Corporation for carrying on the duties? I think I have a list of the officers here. (*The witness referred to the same.*) You are aware that the Town Clerk became one of the Commissioners, so that his place was vacated. There was the new Secretary and an Assistant, the Treasurer and two Clerks, the City Surveyor and his Assistant, the Building Surveyor and Clerk, and a Clerk of Works. These are the officers we found. We also found an Inspector of Nuisances, and an Inspector of Slaughter Houses, an Office-keeper, Messengers, a Clerk of Markets and his Assistant, a Superintendent of Water Works, and a Watchman at Lachlan Swamp.
8. Did you make any material alterations in the extent of the official staff, and the professional men attached to the Department? We got a new Secretary.
9. Who, I presume, performed the duties previously performed by the Town Clerk? Yes.
10. What is the general nature of the duties of the Commissioners—did you divide them? No we did not. We considered that each Commissioner was responsible for the proper performance of the duties of the office. We had two Board Days in the week, and on these days we transacted the business brought before us; we considered the various letters addressed to us, and all matters of that kind: and on another day in the week we had a Court.
11. Will you have the goodness to describe the general routine of the duties from the beginning of the week, at the time of your entering upon office? Each day, when we first commenced, we held a Board. Within a short time after that we found it unnecessary, and merely held a Board meeting twice a week, on Tuesdays and Fridays, the other days were

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- devoted to business in the office and out of doors. We took the general inspection of the City on the afternoon of each day. In the morning we were employed in the office. We received an immense number of letters.
12. You made no special division of the duties, allotting certain duties to one Commissioner, and other duties to another; each had the general supervision of all the works going on? Yes.
13. *By Mr. Irving*: For instance, you had not one Commissioner specially devoted to matters of finance? No.
14. *By the Chairman*: Upon what understanding were you appointed? My understanding was, that the appointment was to continue until the year 1860. In fact, not only was that my own understanding, but I was told so by the late Governor General.
15. Was there any provision in the Act under which you were appointed to that effect? I think the Act was to be in force until the year 1860.
16. Your impression at the time you were appointed was that your appointment would probably continue till the year 1860? Yes.
17. Was there any kind of assurance given you, over and above the provision of the Act, that your appointment would be of a permanent character until that time? No exact assurance. I was very unwilling to take office, and one of the grounds upon which I expressed my unwillingness was, that it might be abolished at any time. The late Governor General said there was the Act, which was to continue in operation till 1860. In fact, I was so unwilling to accept the office, that I requested His Excellency to give me time to consider the matter. As I was going away, he said he wished me to take it; and I did so, much against my own inclination, on account of the responsibility involved.
18. Can you describe to the Committee the general character of the works you have had under your charge since you have been in the Commission, with regard to the City generally, the repairs of the streets, the sanitary arrangements as to the removal of soil, and the water works—what have been the general character of your improvements from the time you took office? I can hardly state more than is contained in the Report I forwarded to the Government last year, and in another Report for the year 1855. The Report for 1855 gives full particulars of all excavation, kerbing, and guttering, and the number of streets repaired. We also furnished a plan, which I believe is now in the office of the Assembly, shewing at one glance the whole of the works that have been done during 1855. It is colored, and bears explanations shewing exactly the quantity of work done. That plan corresponds with the Annual Report for 1855.
19. Which was produced in April or May last? Yes.
20. During 1855, what body of officers had you to take charge of the works of the City generally? For the outdoor work, the Surveyor, the Clerk of Works, and the Overseers, three I think at present. At this moment I hardly remember how many we have, but we have been discharging some lately; but I think there are three for the different offices.
21. In reference to the streets and other works of a like character, are they carried out by contract or by daywork? The greater part by contract; there are a few carried out by daywork. They are of a kind for which we could not make contracts, and consist of jobbing work, as mending parts of roads and streets.
22. In regard to the streets, can you describe what has been done since you took office? For the two years, 1854 and 1855, I could hardly describe at this moment, but, in the Report for 1854, we gave the length of the streets we had repaired.
23. That Report I presume is not accompanied by a map? That is not; but as we thought a plan would make the matter more clear, the Report of this year was accompanied by one in which these particulars are shown. I find by the Report for 1855, that during that year we excavated 535,987 cubic feet, and filled in 57,630 cubic feet, 5,815 tons of blue road metal, and 11,630 tons of ironstone gravel have been laid down in the streets, kerbing to the extent of 15,764 lineal feet, and 56,080 superficial feet of guttering, besides 10,821 lineal feet of rough guttering, 6,009 superficial feet of gutter crossings, 40,108 lineal feet of water channels, and many minor works have been performed chiefly by contract.
24. What has been the amount expended in the making and repairing of streets? I can hardly say; I think Mr. Rae will be able to give you more particular information upon that point; he has taken charge of the figures more than myself, and is much more conversant with them.
25. What metal is now used in repairing the streets, and whence do you obtain it? We are now principally using gravel on the streets we have been repairing, for we have not been repairing the great thoroughfares. The expense of blue metal is very great; our last contract, to the end of 1855, was, I think, 19s. a ton for blue metal laid down at the wharf. A ton will cover four square yards six inches thick.
26. You have been lately using gravel? Yes; not upon the main streets, but such streets as William-street, where there is not so much heavy traffic.
27. *By Mr. Oxley*: At the price you have stated for blue metal—what would it cost per mile to repair the roads with that material?
28. *By the Chairman*: Under what arrangement are the footpaths being flagged? Under the Act passed last year.
29. What were the provisions of that Act with regard to the sideways being paved—on whom is the cost of paving obligatory? On the proprietors.
30. Have there been any distinct measures taken by the Commissioners to improve the sanitary condition of the City—and if so, what measures? Where we have found it necessary, as in the neighbourhood of the Rocks, we have improved the streets, by making a rough guttering, to prevent the stagnant water collecting.
31. Have you also made provision for cleansing the streets by removing night soil? Yes; we remove night soil by contract, at 7d. a cubic foot. We have also a contract for removing dust

dust from the houses; boxes containing dust, ashes, &c, are put outside the houses, and carts pass daily and empty the contents. We also clear out back yards where there have been accumulations of filth of any kind, upon payment being made by the parties who occupy the premises.

32. Do you take any specific measures for the suppression of nuisances generally? Yes.

33. Is the Inspector of Nuisances under your department? He is. We have two Inspectors of Nuisances and they go round, examine premises, and give notice to those parties whose premises require cleansing. If the matter is not then attended to, we serve a notice upon them, and the next step is that they are summoned to the Police Office. From the 1st of September, 1854, we removed 20,102 cubic feet of night-soil, and in 1855, we removed 59,657 cubic feet. A quantity was also removed by other means.

34. Where was it removed to? We remove ours to the Sand Hills. There is now another Contractor for the removal of night-soil, who is not connected with the Commissioners. We understood from the Act that no person unconnected with us could undertake this business, but there was a case in the Supreme Court where the Judge decided against us, on the ground that water-closets were not public places. In the Act it is stated that none but the Commissioners should remove night-soil from public places.

35. To what place does this other contractor remove night-soil? Beyond Botany Toll Bar.

36. On the Sand Hills? There are Sand Hills there.

37. But he does not remove it to the Sand Hills in the immediate vicinity of Sydney for the purpose of improving them, which, I presume, is your object? No.

38. How are the City Markets and Wharfs managed? The Markets, at present, are in the Commissioners' own hands; we let them by the week. We made a new Market last year, or at least we arranged the Campbell-street Market with the intention that it should be for the sale of fruit and vegetables, but it has been a failure, as very few of the stalls have let. Since the Markets were placed in our hands the revenue has increased more than 300 per cent per annum. The receipts for 1853 were £1,532 5s. 5d., and for 1854, while the stalls were still let by auction, £1,701 6s. 6d., while the receipts during the last year, including the Campbell-street Market, were £5,163 16s. 6d.

39. About what expenditure have you to incur on account of the Markets—what balance of revenue is left after the payment of expenses? The expenditure is the salary of the Clerk of the Market a day constable, and also a night watchman.

40. Then the Markets yield a considerable nett revenue to the City Funds over and above the expense incurred in the management? Yes. The chief Market has been newly roofed during the last year.

41. That is the George-street Market? Yes.

42. *By Mr. Egan*: What is the cause of the increase in the revenue from the Market? The change in the mode of letting; it was let by auction before.

43. Were not the stalls formerly let at from three to four shillings a week, and are they not now let as high as fifteen or twenty shillings—are not the dues still let by auction? Yes; but the stalls are kept in our own hands, and a number of stall holders themselves came to us and fixed the rate. The stalls in the Butchers' Market are let at fifteen shillings, and those in the other Markets at ten shillings a week.

44. *By the Chairman*: Do I understand that the markets were let as a whole by auction, and that they are now let to individuals? Yes.

45. There is no middleman between you and the stall holders? No.

46. And you attribute the increase in the revenue to the change in the mode of letting? Yes; no doubt the rent is much higher than formerly; three times more.

47. What are the present arrangements for lighting the City? They are lighted from the City rates; there is no special lighting rate.

48. What is the reason there is no lighting rate? It was refused by the Legislative Council to grant us the power to make such a rate.

49. It was not authorized by the Act? It was authorized by the Act, but that portion of it which referred to the lighting rate, did not work very well, and we applied to the Council to give us power to levy a lighting rate; they refused, and said we must light out of the general City rates.

50. Do you derive any revenue from the Wharfs? From Market Wharf, but not from the others. Lime-street Wharf we attempted to let, but so inadequate a rent was offered that we would not accept the offer, and it was afterwards discovered that we only got that wharf from Government for the purpose of laying down stores; we have applied to have that altered, and to obtain power to let.

51. You think some revenue may in future be derived from that source? Yes.

52. What are your powers with regard to hackney carriages, and how have they been exercised? All hackney carriages and omnibusses are cast upon the Commissioners.

53. So as to give their control entirely into the hands of the Commissioners? Yes.

54. Do you derive any revenue from them? Yes.

55. Is that revenue more than sufficient to meet the expenses in the way of inspection? Yes.

56. What is the general nature of the powers and duties entrusted to the Commissioners with regard to the sewerage works—what are they empowered, authorized, and required to do? By the Sewerage Act we are authorized and required to make sewers throughout the whole City.

57. When you took office, did you find any general system of sewers existing? There was no general system, nor could we get plans of existing sewers; we applied both to the Surveyor General's and Colonial Secretary's Office respecting them, but could not get them.

58. What was the nature of the duties cast upon you by the Sewerage Act—how were you authorized to make sewers? We were authorized and required to establish a general system of sewers throughout the City.

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59. When were these duties and powers devolved upon you—from the time of your appointment? Yes.
60. What steps were taken by the Commissioners to carry out the new works? The first step that was taken was to have a survey made of the whole City—a trigonometrical survey.
61. How was that survey carried out? It was carried out by the Engineer and the Surveyors under him.
62. By the Engineer appointed by the Commissioners? Yes, and the Surveyors under him.
63. In what condition is that survey now—is it finished? It will be finished by the end of December—at least, we hope so.
64. That was, I presume, sufficiently advanced before the sewerage works were entered upon? Yes; the triangulation was done before the sewerage works were commenced; it is only the plotting that has now to be filled in.
65. What has been the cost of the survey up to this date? Upwards of £3,000.
66. You were authorized to raise certain sums of money, were you not, for carrying out this new sewerage system? No; the money was to be given us by the Government.
67. Government were to raise the money and transfer it to you? Yes.
68. And a considerable portion of this money has been raised? Yes.
69. What amount has been placed at your disposal for the purpose of sewerage, up to this time? I can hardly carry the amount in my memory, but I can say what we have paid already. The contractor for the new sewerage has received somewhere about £103,000 on account of the works, and the work he has performed amounts to somewhere about £106,000, so that we are about £3,000 in his debt.
70. What steps did you first take with the view of carrying out these sewers, after providing for a trigonometrical survey? There was a portion of the City told off as No. 1 section. In this the first portion of the sewerage was to be carried out, and it embraced Pitt, Castle-reagh, Elizabeth, Phillip, Macquarie, and Bridge streets. There was a main sewer from New Pitt-street to Fort Macquarie.
71. So that the boundary line of that section on the east was Macquarie-street, and on the west Pitt-street? Yes; we made a sewer down Bridge-street—a small sewer.
72. How far southerly did these sewers extend? To Bathurst-street.
73. To Fort Macquarie, where the sewers were to discharge? Yes; all the sewers in that section.
74. What officers were appointed to carry out your sewerage works? There were the Engineer-in-chief and two Assistants. These officers were appointed to perform mixed duties, to take charge both of the sewerage and of the water-works. We have had such a number of plans to prepare that we have been obliged to have a large staff.
75. What was the number and character of the officers appointed by you to carry out these conjoint works? The Engineer-in-chief and, at different periods of the work, I believe eight Assistant Engineers.
76. Besides, I suppose, subordinates? Yes, besides working Overseers. These men I now speak of have been principally office-men—draughtsmen for making plans.
77. What steps did you take, when appointing these men, to secure a right stamp of men for carrying on the works? In the first instance we advertised for an Engineer, and received several applications—I forget how many—six or seven, perhaps, not more—and we selected the one whom we considered to be the best recommended.
78. I presume the advertisement appeared in the papers for a sufficient length of time to enable competent persons to become acquainted with the fact, and to make application for the office? Yes.
79. Did you preserve the testimonials that were sent to you by the applicants? No; I think they were given back to all.
80. On whom did the appointment devolve? On Mr. Rider.
81. Did you retain the testimonials furnished by him, as to his competency or fitness for office, or copies of them? I am not sure whether we retained them.
82. If you have them, will you forward them to the Committee? Yes. I may mention, with regard to Mr. Rider's testimonials, that we had one from Mr. Fanning, of Messrs. Griffiths, Fanning, and Co, who informed us that he had the highest character of him from a gentleman in London, in whom he placed the utmost confidence. We knew nothing of Mr. Rider ourselves—I never saw him before he made the application.
83. I presume the appointment was not made on Mr. Fanning's recommendation alone? No.
84. It was only a corroboration of the testimonials which Mr. Rider himself supplied? Just so.
85. When did Mr. Rider's appointment take place? It must have been towards the end of January, 1854.
86. What steps were taken with regard to the appointment of his Assistants—was the same course pursued? I think the same course was pursued. I am not quite sure whether we advertised for all; but I can supply that information. At that time it was very difficult to get people, and we had few applications. I think we took those who applied, without advertising.
87. With regard to the Assistants appointed, did the Commissioners decide as to their eligibility, or did the decision depend upon Mr. Rider? None were appointed without the approval of the Commissioners. They were appointed upon the testimonials they produced of their competency.
88. Did the appointment practically rest with the Commissioners, or with Mr. Rider? With the Commissioners.
89. Did they consult with Mr. Rider before making the appointment? Yes.
90. You took his advice as to the competency of those you appointed to assist him? Yes.



91. What steps were first taken by Mr. Rider, when he was appointed Engineer, in regard to the sewers? First of all he made a trigonometrical survey.
92. Which, of course, was supplied to his hands by an officer not subordinate to him. The person carrying on this, I suppose, was appointed to be independent of him? Our present Surveyor, Mr. Baron, was the person immediately under him, who did carry on the survey. He is the most competent person to give information about the survey.
93. The first step taken by Mr. Rider was to survey a certain section of the City—? No, he surveyed the whole City, and then took a particular section, as the one which could most advantageously be carried out first.
94. And that survey is at present as you have described it? Yes.
95. What was the time occupied in these preliminary steps before the work was actually entered upon? Several months. It was at a time when everything was at the very highest, and we had great difficulty in getting anything done.
96. When the Engineer did determine on the steps he was to take, what course did the Commissioners adopt, or did they take any, to decide whether his was the best plan to carry out the objects they had in view? We consulted together on the matter, and, taking every thing into consideration, as far as we could, were of opinion, that the plan he proposed was best suited for carrying out the object.
97. Were the plans and drawings of the section of sewerage decided to be entered upon completed before the work was commenced? The whole of the plans were not completed, but the plans of the part he was about to execute were sufficiently complete to enable him to know the levels.
98. Of the whole section upon which he was entering? Yes.
99. Did the Commissioners, before they sanctioned the carrying out of the work, satisfy themselves that the plans were sufficient for the purpose, and not needlessly expensive? We considered them to be sufficient for the purpose, and not needlessly expensive.
100. When your Engineer was ready to proceed with the Sewerage works, what steps were taken, with regard to carrying them out? We advertised for tenders.
101. What time did you allow for the sending in of tenders? I do not remember, but we gave considerable time—I think a month—I hardly remember the exact time.
102. How many tenders were sent in? I think four or five.
103. Were equal facilities afforded to all the tenderers, to obtain the information they required? Equally so, so far as my knowledge goes.
104. Did the general plan of Sewerage which Mr. Rider had decided upon provide for a main sewer in George-street? It was what he always held out to be necessary, but no other section than the one now in process was decided upon exactly how it was to be; his idea was that there should be a main sewer in George-street.
105. That George-street, and the streets leading into it, would be drained by a system of minor sewers, distinct from that he had entered upon in Pitt-street? Yes; that all to the west of George-street should be drained by a main sewer down George-street, but that was not decided upon by us.
106. Have you any idea of the probable cost of this sewer, supposing it had been constructed? No, I could not form any idea what that would be; it would, in all probability, be of the same size as the Pitt-street sewer.
107. You have, I believe, abandoned the idea of having a main sewer in George-street, under the advice of your present Engineer? Yes.
108. Who finds that a main sewer in George-street is altogether unnecessary? Yes; that part of the town can be drained by enlarging Bridge-street sewer, and bringing it into the present main sewer. The main sewer is capable of carrying off the sewage which George-street sewer would have drained.
109. In the report furnished by the present Engineer, I observe that he states that he was not able to find plans and drawings, and that the papers in the Engineer's office were in great confusion when he entered upon his duties; how did the Commissioners account for that being the case? I believe the late Engineer's papers were in a great deal of confusion—his letters, and so forth; but all the plans necessary for carrying on the work were there, as far as I understand. What I think Mr. Bell referred to, was the cross sections; he thought the cross sections of streets, such as King-street, were included in the section which they were not. There were no plans of those streets.
110. I presume there will be a very considerable saving to the City from the alteration which has been determined upon by the present Engineer, in dispensing with the main sewer in George-street? No doubt a very considerable saving; at this moment I forget how much.
111. Have you any reason to believe, that if the late Engineer had remained in office that the sewer in George-street would not have been constructed? I do not know what might have followed. No doubt his plan was to make a sewer in George-street, although it was not a settled plan; it was not decided upon by us; it was what he proposed.
112. I perceive that the Board appointed by the Governor General to report on the City Works, have proceeded on the assumption that your original Engineer had pretty well decided upon a distinct main sewer in George-street, which would have drained that section of the City and emptied itself somewhere towards the lower part of George-street—at Dawes Battery? It was talked of.
113. I perceive that the Board so appointed by the Government satisfied themselves that this sewer was quite unnecessary? They agreed with the present Engineer that this sewer was altogether unnecessary.
114. And that all the purposes of this sewer could be answered by draining George-street into the main sewer? Yes.
115. So that the expenditure which would have been incurred is now saved to the City by the amended plan suggested to the Board by the present Engineer? Yes.
116. So that in every point of view, you are satisfied that the plan now adopted by the present Engineer is superior to that contemplated by the first? Yes.

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117. It avoid's interference with the traffic in George-street, and will save a considerable sum of money? Yes.
118. I observe that Mr. Bell, in his report to you, dated 28th March, 1856, says, "On taking office I found the sewerage works in these streets in a very considerable state of advancement, and it was only reasonable to expect that I should find in the office a general plan, shewing the works intended to be executed on the whole section, and working drawings of the same, shewing how they were carrying, and to be carried out, in detail; but this was not the case?" We had the longitudinal sections, but not the cross sections, which he says were necessary.
119. Mr. Bell here states that he could not find a general plan shewing the works to be executed in that section? Mr. Bell will, I presume, be before you, and he will be able to explain that matter satisfactorily.
120. How did the Commissioners satisfy themselves so as to allow Mr. Rider to carry on difficult and expensive works of this character without, before he undertook them, having the plans and drawings before them in such a state as to enable them to see how he proposed to execute them? There were such drawings as would enable him to carry on the sewers, and we saw them; but there are other drawings that Mr. Bell says he ought to have had also.
121. What I want to know is, how you account for Mr. Bell demurring to the sufficiency of the plans and drawings which Mr. Rider said were sufficient? Mr. Rider said he had sufficient drawings. Longitudinal drawings of each street were placed before us, but Mr. Bell says other drawings were necessary. I was not aware of that; and Mr. Bell now says the works could be carried on without them.
122. Mr. Bell says they could have been carried on much more satisfactorily if there had been other plans. He also states, "Your Engineer's Office and papers were in such a state of derangement that it was with the greatest difficulty and trouble I could obtain a correct knowledge of the proceedings, or learn the actual state of the works which were executed"—How do the Commissioners account for that? I do not know what he refers to, but no doubt his papers were not in the methodically arranged state they ought to have been, and that was the principal reason of our getting rid of him.
123. Do you not think it was the duty of the Commissioners, as they were responsible for the expenditure of these moneys, to satisfy themselves that there were proper plans, and to take efficient means for insuring that these papers were kept in a proper state? I do not know what he alludes to.
124. I presume he alludes to the papers in connection with the sewerage as then carried out? My idea is that all the plans and papers necessary for carrying these out were in existence; they were brought before us for each street as they were carried out.
125. Do you not consider that it was the duty of the Commissioners to see that the papers were not in the state described by Mr. Bell? I do not know what papers he refers to—if they were papers of consequence, no doubt; but it did not come to our knowledge that any papers were wanting.
126. *By Mr. Oxley:* Did the Commissioners ever exercise any judgment of their own with respect to the duplicate sewers, because it must be evident that the western as well as the eastern side of Sydney, must be drained by one main sewer? We did exercise our judgment as far as we were in a position to do so. The fact is, we were not competent to give an opinion upon that—it would depend upon the area to be drained.
127. Then do the Commissioners admit that they may be led into any amount of error because they do not take the trouble to calculate—did they take for granted that the statement of the Engineer was correct? We endeavoured to make ourselves acquainted with the matter as far as we could. One of my objections to take the office was the responsibility which would attach to it, and the late Governor replied that the responsibility was simply to find a proper Engineer, and that we must go by his advice.
128. *By the Chairman:* I suppose you are now aware that if the original intention of the Engineer had been carried out, a large sum of money would have been wasted? Yes; but I beg to state distinctly that this was not finally adopted or settled; there might have been many reasons to lead us to alter the plan.
129. Up to the time of Mr. Rider's leaving he had not stated anything, either by written reports or verbally, to lead to the belief that he had become alive to the non-necessity of constructing a main sewer in George-street? It never came before us officially; we had only to do with the one section in progress.
130. When the tenders were sent in, what steps did the Commissioners take to decide upon which was the best tenderer? We laid, as usual, all these matters before the Engineer; he analysed the tenders, and gave his opinion that the tender of Mr. Randle was the most eligible.
131. Can you refer the Committee to copies of the tenders sent in? Yes.
132. I presume the copies of the tenders and the analysis printed in the Final Report of the Committee of the Legislative Council which sat last year, may be assumed to be correct copies? Yes.
133. You were satisfied, from your own examination of the tenders, and from the Engineer's analysis, that the tender sent in by Mr. Randle was the best for the public interest? Yes.
134. Did you take any trouble to test the correctness of the analysis furnished by the Engineer? His assistants went through them as well, but I must say, I did not consider myself competent to undertake the task.
135. Whose tender was accepted? Mr. Randle's.
136. You have, I presume, a copy of the contract? Yes; what he acts upon is merely a letter; it was laid before the Committee of last Session, and has been printed, I believe.
137. If it has been so printed, the Committee may assume it to be correct? Yes.
138. Did the Commissioners examine the contract with any degree of care, to satisfy themselves

selves that it was a sufficiently business-like contract to enter upon such a work? Yes; we went over it and considered it was.

139. You considered these documents were business-like documents? Yes, as far as we could gather, always taking into consideration that none of us were practical men.

140. What steps were taken to enforce the provisions of the contract? We had people on the works appointed for that purpose; the Assistant-Engineer was there constantly, and Overseers.

141. Were they charged specially with the duty of seeing that the whole of the requirements of the contract, the work and material were good? Yes, that was their special duty.

142. In that case, how do you account for the use of the bricks which are stated in the Report of the Board appointed by the Governor General, as well as in the Report of the Committee of Council of last Session, to be bad—I refer to those used in Bridge-street? I cannot account for the use of bad bricks in any other way; if there were any bad bricks, which I was not aware of myself, although I was constantly there, than that some few might have escaped notice. But they could not have been very bad or I should have observed them, and the present Engineer says that although there are some bad bricks, there are very few in proportion to the whole of the work done—and that in any large work of the kind, it is difficult entirely to avoid the use of such bricks.

143. The Report of the Government Board says, "Upon the whole, the work is sound and substantial, and the materials generally sufficient, and of good quality," but "in a few parts, the bricks are not so hard and sound as it is desirable they should be in a work of this nature; this is the case more particularly in Bridge street and part of Pitt-street sewers. In these parts, however, we believe the work is sufficiently sound and good, and that no perceptible evil or defect in the work is likely to occur from any inferiority there may be in the bricks." If you had an Assistant-Engineer and Inspector to examine these works, and to guard the City against the use of materials that were not sound, how was it that your attention was not called to the matter when unsound materials were used? The Bridge-street sewer was constructed in the commencement of the works, and we had hardly got into a properly organized state at that time; some bad bricks might then have got in, as, perhaps, we had not sufficient supervision. We increased our supervision as the work proceeded, in consequence of the suggestions made by the Committee of last year.

144. You are now under the impression that in the earlier parts of the work your means of supervision, and of enforcing the conditions of the contract, were not sufficient? I thought they were.

145. Are you now satisfied that you had not sufficient supervision? I cannot say I am; I think these men might have overlooked the work sufficiently.

146. The Report of the Board says, "The cement rendering generally is carelessly executed, and in many parts too much sand has been used with the cement to ensure sound and durable work, but as none of the sewers are in use, excepting part of the Pitt-street sewer, there is every opportunity for performing this work, except in the sewer above-mentioned, by removing the defective parts and rendering them again with proper materials. These defects have been made known to the contractor, with an intimation that the same must be remedied before the works can be finally measured and passed." The condemnation of the rendering there is very strong? No doubt the rendering has not been good; there is one reason for the rendering not being so: at that time there was a great deal of water in the sewer. We had not then adopted a plan we now adopt—a most admirable one—to cut a chase in the bottom of the sewer, a brick wide, to carry off the under water, so as to keep the sewer completely dry, and the difficulty of rendering where it is wet is great; but all that will be remedied.

147. Have you taken steps to secure that the whole of this defective rendering shall be replaced? Yes; we have sufficient funds in hand to replace the whole.

148. You intend to see that the contractor replaces this defective rendering? Yes; and if he does not, we can replace it with the funds we have in hand.

149. Are the Commissioners satisfied that the best mode of carrying out the sewerage works is by tunnelling? Yes, we thought so, and I am still of that opinion where it was done.

150. You think that wherever tunnelling was adopted it was the best plan of carrying out the work? Yes, that is my opinion. There may be a difference of opinion on the subject. Perhaps some parts of Pitt-street might have been open cutting, but that is a great thoroughfare. One great obstacle is, that there is a nine-inch main all down the centre of Pitt-street, and there are branch mains and service pipes both for gas and water,—a regular net work of pipes, besides, it would have been a great obstruction to the thoroughfare.

151. In reference to the mode of carrying on the sewerage works, whether by tunnelling or open cutting, was there discretion entrusted to the Engineer as to the mode he should adopt? The Engineer recommended in every case.

152. So that the Commissioners finally decided whether there should be tunnelling or open cutting in a given locality? Yes, by the recommendation of the Engineer.

153. He had not the power to have tunnelling without the concurrence of the Commissioners? No.

154. In regard to each of these streets, did the Commissioners take the trouble to satisfy themselves that the Engineer's plan was the best? Yes, so far as I am concerned, I did.

155. The Commissioners did give themselves the trouble to satisfy themselves? Yes; we took every means in our power, which were very limited. When I asked the question of any persons likely to know I got very unsatisfactory answers, because they did not like to give any opinion upon it. The Act gives no power to the Commissioners to confer with any one; we are told to do a certain thing, but have no instructions how to do it, or to refer to any one; we must take that responsibility upon ourselves.

156. Is there any material difference in the comparative cost of the two modes of carrying out the sewerage? There is an apparent difference, but it depends upon the depth you go.

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If an open cutting goes down more than eighteen feet, it is more expensive than tunnelling. 157. That was taken into account by the Engineer? Yes, and also the other things I have mentioned, the obstruction to traffic, and damage to the gas and water pipes.

158. With regard to the measurements made from time to time, who was charged with making those measurements? The Engineer was the person responsible to the Commissioners.

159. *By Mr. Egan*: Did it ever occur to the Commissioners before they accepted any tender, that it was necessary to give information to the persons tendering; of the nature of the soil of each street? No.

160. Then it was all hap hazard? No; the work was done by a schedule of prices.

161. *By the Chairman*: You say that the Chief Engineer was responsible to you for the accuracy of these measurements? He made them at the end of the quarter, but there was generally a measurement every fortnight; at least he was there when they were made.

162. He revised them? Yes.

163. He made himself distinctly responsible to you for the accurate results of the measurements? Yes.

164. I presume it will not be denied that there have been great variations in the fortnightly statements that have been furnished? There have been.

165. How do you account for these variations? I account for it by supposing that the Assistant Engineer, Mr. Mais, who did measure—whose more immediate duty it was to make these measurements, made mistakes; but at the same time I beg to be distinctly understood, that all the mistakes made by Mr. Mais were corrected by himself, before they were taken notice of by any one else. Perhaps there might be two or three subsequent measurements made before the error was corrected.

166. Do you mean to say that they were always corrected by him before his attention was called in any way to them? Yes; I should wish the Committee to understand this, that these mistakes occurred during the time that the late Committee of the Legislative Council were sitting. Mr. Mais was frequently called before this Committee, and was charged with a great number of frauds, his mind was harrassed, and he was in a state hardly to be conceived, morning, noon, and night. Under these circumstances, he was hardly in a fit state to make these calculations accurately, calculations which require a very clear head. I think many of his mistakes were made in consequence of his attendance here, and of his mind being carried off his work.

167. Then Mr. Mais was the person who actually made these measurements generally? He made the fortnightly ones.

168. I believe there was a final measurement of the works made in December last by your own Engineer, Mr. Rider, assisted by your other Engineers on the part of the Commissioners, and by Mr. Randle and his assistants on his own part? Yes.

169. Do the results of that measurement tally with Mr. Bell's made, in March last? Yes. There are errors which one can easily account for; for instance, in this very street, Macquarie-street, there are four or five junctions, or collars for junctions, charged in December by Mr. Mais more than Mr. Bell admits; but Mr. Bell says he can easily account for that difference. He states that there is great difficulty in getting up that sewer, the light is frequently blown-out, and a person going through has to creep on his hands and knees, so that he may easily make a mistake of one or two junctions. There was a very great mistake originally; but I think the final result arrived at by Mr. Bell is, that there are fifty-seven junctions; according to Mr. Rider's measurement, in December last, there are sixty-one. Previous to that there was a great discrepancy; the numbers put down in the fortnightly measurements were 480. That was continued two or three fortnights, but the error was discovered by Mr. Mais himself. It was an absurd mistake, and never could have continued beyond the quarter.

170. This error was corrected in the final measurement in December? Yes; Mr. Mais brought the number down to ninety. He took the length of the street at so much, and then divided by thirty, and that made ninety junctions; but he forgot that there was a part of the street where there were no junctions.

171. Then Mr. Mais reduced the junctions from 480 to 90, and Mr. Rider and his assistants, in December, reduced them to 61, and Mr. Bell, in March, reduced them to 57? Yes.

172. You believe the result of the final measurement in December tallies substantially with the statement made by Mr. Bell in March? Yes, substantially.

173. And you are satisfied that the measurements arrived at by Mr. Bell are correct? We believe not the slightest error. I believe there are some few yards disputed between Mr. Randle and him, but nothing important.

174. If you had proper plans of the junctions and collars, could not the returns of the measurements be compared? They were calculated at one in thirty feet; but if it had been looked at particularly, it might have been discovered when attention was turned to it. As far as the Commissioners are concerned in the fortnightly measurements, they are never particular in going into them, if we find there is sufficient work done to warrant us in paying a certain amount of money until the quarterly measurements take place, when the settlement is made, which is not, however, a final one, being always open to adjustment.

175. The fortnightly measurement was for the purpose of satisfying you how much you would be justified in paying on account; but for the final adjustment careful quarterly measurements were made, and these were subject to be revised at any time previous to the completion of the contract? Yes; you will find that is Mr. Randle's view of the matter from his evidence.

176. *By Mr. Robertson*: Would measurements so very rough as to make 480 instead of 57, be of any advantage to enable you to determine how much money you ought to pay? Our payments were very large, and 480 junctions at 4s. bore a very small proportion to the whole; we have always had a sum of £3,000 or £4,000 in hand over and above the work done; we never run close to the amount.

177. Were there any means whereby the Commissioners could be satisfied that there might not be the same class of mistakes in other matters as this mistake of 480 junctions instead of 57—were there any means of knowing that that class of mistakes might not range over more items? This 480 was absurd; it was a clerical error; it must have been put down by mistake.

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178. *By the Chairman:* In regard to the excavations, what steps were taken by the Commissioners to see that the right charges were made as to the proportion of tunnelling and cutting that might be classed as rock, or soil, or of a mixed character? It was decided at the time, as each piece of work was proceeded with, whether it should be paid for as rock, or soil, or mixed in certain proportions, half and half, or two-thirds and one-third, as the case might be.

179. What steps were taken by the Engineer to determine its character? He examined it.  
180. He went down all these tunnels, he or his assistants? Yes, and reported on the character of the excavation, whether rock or soil. Each fortnight we saw so many cubic yards of rock, so many of soil, and so many mixed.

181. Before paying anything on account of these excavations, did the Commissioners take any steps to satisfy themselves that the reports made by the Engineer were substantially correct, or did they rely implicitly upon his reports? We relied very much upon his report, but we were constantly on the spot, and saw what was coming up, and we believed what he stated as to quantity to be correct.

182. Do you now believe that the charges which were sanctioned by your Engineer for the soil, and excavations which were partly soil and partly rock, were correct? I think so; they are borne out by reports that have since been made by our present Engineer.

183. In no case is the charge allowed by the former Engineer set aside by the present Engineer or by the Board? In none.

184. In the original specification and contract was there any agreement made for stuff of a mixed character? No.

185. How do you account for that omission—did you not expect to find that any portion of the ground through which you tunnelled would participate of a mixed character, more or less? I believe it is always understood, when it is neither the one nor the other, that we must take the proportion of each.

186. But there was no provision made, that, when there was so much rock and so much soil, it should be reckoned as such? No.

187. Do you not think *that* a serious omission, and one calculated to lead to disputes? No doubt it would have been better to have had *that* provided for, but then there would have been a difficulty in that again, for you must have the proportion; the difficulty was, to know whether it was one-third, one-half, or two-thirds soil; in each case we should have had to settle the proportions, for it is not always half and half.

188. Would it not have been a more business like arrangement to have defined, that where the Engineer decided, or agreed with the contractor, that the ground tunnelled or open-cut was so much rock and so much soil, a certain rate should be paid, instead of leaving it to be determined almost arbitrarily by the Engineer afterwards? I hardly know how that could be ascertained until they came to try.

189. But the schedule of prices was not fixed—would it not have been better to have fixed the schedule of prices that should have been paid for ground however composed, whether half rock, two-thirds soil, or in any other proportion? It might have been; still I do not think it would have saved anything in the long run.

190. Would it not have prevented a great deal of uncertainty? There would have been the same uncertainty, for it must have been decided by the Engineer, after all, what particular proportions named in the schedule the ground in course of excavation would come under—whether two-thirds rock and one-third soil, or half rock and half soil, or any other proportions.

191. How were the payments made on account of the sewerage works—under what plan were the payments made, on account? On account, upon certificates from the Engineer fortnightly.

192. Did the Commissioners take any steps to satisfy themselves, that, by paying on these certificates, they did not allow Mr. Randle to overdraw? We were perfectly sure he was not overdrawing.

193. You are satisfied that never, at any time during your contract with Mr. Randle, did he draw more than he was entitled to? I am prepared to say that he never got within £3,000 of the amount he was entitled to.

194. In fact, you are prepared to say that Mr. Randle never, at any time, overdrew his account? Yes.

195. What is the present condition of the contract—in what state does the work stand—what proportion of the particular section that has been undertaken may be assumed to be finished? You can ascertain that from Mr. Bell; but I can state what has been done.

196. How much of the contract has been done? The main sewer is finished; that is the one from Pitt-street to Fort Macquarie—the six feet sewer.

197. That is the sewer into which all the others empty themselves? Yes.

198. Where does it commence? At the Star Hotel, at the junction of Pitt and Bridge Streets; it goes under those stores all the way down to Fort Macquarie; but the outlet is not finished; that is a separate contract for the distance between the bastion out to near the buoy.

199. That contract is not completed? It will be completed in six weeks, I believe.

200. I think you say you can state the amount that has been expended up to this time on the sewers? Yes; altogether £106,000 have been expended up to the first of this month, and it will take about £10,000 more to finish the whole of the works in this section, with the exception of the second contract, which is for £3,000.

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201. Then the estimate is, that the total cost will be £116,000 in addition to what may be required for the additional contract? Yes.
202. What was the original estimate of the cost of this section? £54,000.
203. This work will, when completed, actually cost £116,000? Yes.
204. So that the actual cost has exceeded by more than one hundred per cent. the estimated cost? Yes.
205. The excess, in fact, will be £62,000? Yes; the reason given for that is, that the character of the ground was not known; the Engineer took it to be a much smaller proportion of rock than it turned out to be.
206. Do you not conceive that that is a very serious reflection upon the care exercised by the Engineer in making his preliminary examination—that he should be so enormously out in his estimate of the probable cost? Yes; but it does not affect the result, if the work has to be done.
207. Does it not affect the result in this way—if the Assembly, acting for the citizens, had been conscious that the cost would be £116,000, they might have hesitated about carrying out the work, or decided that it should not be carried out; but imagining the cost would be but £54,000, they might have felt justified in proceeding with it? No doubt; but to have arrived at a full knowledge of the character of the ground, the Engineer would have had to try the nature of the soil all along the course of the sewers.
208. Would it not have been much better to have incurred a greater cost in making this preliminary examination, and to have made an estimate that might have been relied upon, rather than that the work should cost twice as much as the estimate? With regard to taking more time, we were blamed by a Committee of the late Council for taking too much time, and we got as soon to work after that Committee sat as we possibly could; we were blamed for not having commenced the sewers long before, but we took every means for obtaining information; no doubt the estimate was very much less than the actual cost.
209. *By Mr. Oaley:* Had you the plans of the sewers before you when the Engineer sent in his estimate? We had the longitudinal plans. Which plans do you mean?
210. The plans of the sections? Yes.
211. *By the Chairman:* Those plans Mr. Bell thinks were not sufficient? That, of course, I was not a judge of.
212. Mr. Rider is not now your Engineer? No, he is not.
213. When did Mr. Rider leave? Sometime in the beginning of the year.
214. January or February? Yes.
215. Did he leave of his own accord, or was he dismissed? We gave him notice that we did not require his services any more.
216. You, in fact, dismissed him? It amounted to that.
217. On what grounds did you come to a determination to dispense with his services? For general carelessness; he did not attend to the office as he should have done; and we did not get prompt replies to our communications.
218. The more immediate cause that led to his dismissal was his recent remissness in attending to his official duties? Yes.
219. Did you feel any doubts as to his competency and trustworthiness in carrying out his duties? We had no reason to believe that he was not trustworthy; nothing came before us that we could put our fingers upon that would lead us to believe he was not trustworthy.
220. That he was not honest? That he was not honest.
221. Had anything led you to doubt his fitness or competency? I think his fitness for the office was very questionable on account of his carelessness; but as to his incompetency I have no reason to suppose that.
222. You think his incompetency arose from neglect of duty? Yes.
223. Did it not occur to you, as the actual cost of these sewers began to dawn upon you, that his preliminary examinations must have been very incompetently, or very carelessly, carried out? We spoke to him on the subject, but he took his opinion of the character of the soil from different architects, and he made his calculations from the information he received from those gentlemen.
224. Did any Assistant Engineer leave your office at the same time with Mr. Rider, or subsequently? Mr. Mais left subsequently.
225. About what date? I think Mr. Mais left in May.
226. Did Mr. Mais leave of his own accord? He resigned; but perhaps it was not a resignation of his own accord; he got a notice from Mr. Bell that it would be as well for him to resign.
227. He got an intimation that if he did not resign he would be dismissed? From the circumstances that had occurred, we wished to be relieved of his services in that capacity; he was retained for a month or six weeks afterwards to make drawings—he was a very good draughtsman.
228. You thought it desirable to be relieved from Mr. Mais' attendance, although you did not feel sufficiently dissatisfied with him to justify his dismissal? Yes; and in all our intercourse with Mr. Mais, I must do him the justice to say, that I never could, for one instant, believe there was any thing dishonest about him.
229. The present Engineer was engaged, as I learn from this Report, on the 12th February last? Yes.
230. *By Mr. Egan:* Was it not upon the certificate of Mr. Mais that the moneys were paid, and have the Commissioners any record, or any other document, showing the measurements, except the private memorandum-book which he refused to give up? Yes; there was a certificate signed by Mr. Mais, and countersigned by the Engineer.

231. But the detail—was there not a private memorandum-book which he refused to give up when requested by the Commissioners? The field-book is in the possession of the Commissioners. G. Elliott,  
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232. Did he decline to give up that book, or to show it to the Committee which sat last year? Yes; but he gave it to the Commissioners. 13 Nov., 1856.
233. He distinctly refused to produce it to the Committee? Yes.
234. He stated that it was his private property? Yes. He stated that it was unprofessional to give up that book, and he was borne out in that statement by Mr. Wallace. I asked him the question, and he said it was never done; he said it was unprofessional to let it go.
235. Did not the Commissioners apply for it themselves, and was it not refused to be shown or given up? Certainly not. I believe it is now in my possession: I am almost certain it is in my desk at this moment.
236. Although Mr. Mais refused to give up this book to the Committee, he never refused to give it to you? No. His own field-book was always produced whenever it was wanted, but we did not require it; we had the certificate made from that.
237. He never refused to submit this book to you? No.
238. You believe you have it now in your possession? Yes.
239. *By the Chairman:* When the present Engineer was engaged, did he submit any testimonials? We did exactly the same as we did before. We advertised, and got a good number of applications; we looked them over, of course, carefully; and we were as particular as we possibly could be. We chose from among the whole number of applications those we thought most likely, and selected from the smaller number until we reduced it to two; we were then in very great doubt, and submitted them to Captain Ward, who kindly looked them over; he said it was hardly possible to say who was the more eligible, not knowing the parties themselves; there could not be better, or more equal certificates; but on seeing the men, and talking with them, we preferred Mr. Bell, and we think we have not made a bad choice. The other gentleman has an appointment at Geelong. There was one little thing in favor of Mr. Bell; that Mr. Miller, the other applicant, was more of an architect, and Mr. Bell had been very much employed in works of the same character as those we were carrying out; he had been in Russia lately, and had a good deal of experience there.
240. You are satisfied that the testimonials submitted by Mr. Bell were satisfactory? Yes.
241. And you have reason to believe that the choice you have made was a right choice? Yes. I have nothing to say against the other gentleman.
242. Has there been any change made by Mr. Bell, since his appointment, in the general plan of the works? Not in the sewerage, except with regard to George-street; so far as I could learn from him, he thought the plan by Mr. Rider was a very proper and judicious one.
243. The original conception of the work by Mr. Rider was perfectly correct? Yes.
244. Has he made any alteration in the arrangements for carrying out the works—do tunnelling and open cutting go on in much the same proportion as before, or does Mr. Bell cause a larger proportion of the work to be done by open cutting? We have only had open cutting in Castlereagh-street since Mr. Bell came, and we have had great complaints by the inhabitants. That, I think, is the only open cutting that has been made since Mr. Bell had charge; it was a part we could do in that way, but even there it was very difficult to do it; the excavated stuff took up so much of the street. With regard to the character of the soil, Mr. Bell agrees perfectly with what we did before, and is following up the same principle.
245. He thinks the plan adopted by Mr. Rider was correct? Yes.
246. He has made no material change, as far as you know, in carrying out the works? I think not; he is very strict with the Contractor.
247. More strict than the previous Engineer? I think he is.
248. When the general plan of the sewers was adopted, was proper attention paid to facility of connection with the sewers—were the levels taken with a view to that? Yes.
249. You think there will be no difficulty in connecting the drains from private dwellings with the sewers? No. In fact they are all constructed with a view to that.
250. Do you not think the level is too deep, and that it will be attended with unnecessary expense to connect the drains from private houses? Where it has occurred it has been the fault of the parties themselves.
251. That point was distinctly considered? Yes; it was one of the principal points.
252. With regard to the water works, you have, I presume, similar duties and powers, with reference to carrying them out, that you have with reference to carrying out the sewers? Yes.
253. The General Government were authorized to raise money to enable you to carry on these works, and did raise it? Yes.
254. What amount have you raised up to the present time to enable you to carry out the water works? Mr. Rae will give you more information on that subject than I can.
255. You entered on your duties under the Water Act much about the same time as you did under the Sewerage Act? Yes.
256. Were any steps taken, independently of the new water works that are about to be undertaken, to increase the temporary supply by the present arrangement? Before the Corporation went out of office there were works in progress at the Lachlan Swamps, which we carried out.
257. The result of carrying out that work has been to increase the supply? I think that pump gives about two hundred and fifty thousand gallons a day.
258. *By Mr. Egan:* Which would have passed away if that work had not been undertaken? Yes.
259. It is an increase to the supply of water to the City? Yes.
260. *By the Chairman:* With regard to the permanent works for which these loans have been raised, under whose charge have the steps you have taken been carried out? The Engineer.

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261. The same Engineer? Yes. He had made a great number of plans, and very elaborate plans, but they were found, when we advertised for tenders, to be too expensive. We advertised, I think, three times, and each time we reduced the plan in some way or other.
262. The extent of the work? We diminished the cost. Finally, we did not accept any tender.
263. So that you did not enter upon any serious amount of work in connexion with the supply of water? No. The only thing that we have done is, that we have ordered out the pipes and engines.
264. What actual steps have you taken with reference to the water works up to this time? The plans are ready.
265. Have you taken any steps to enter upon such works up to this time, or have your works been of a preliminary character? Of a preliminary character; but we are in that state of forwardness that the water can be in Sydney within thirteen or fourteen months.
266. Are you prepared to enter upon these works—have you made arrangements for commencing them? Yes; we have accepted a tender lately for laying pipes from Botany to Sydney.
267. Have you purchased any land with a view to the erection of water works? We took possession of some.
268. Some land at Botany? Yes.
269. With the view of enlarging the area to be drained? Yes; we considered it necessary to have the land.
270. There has, I presume, been no large amount expended in carrying out works up to this time at the Reserve, or on the line to Sydney? Not on the actual works; but the pipes are imported, and the engines are on their way.
271. Can you give any idea what the cost of land and works had been prior to the dismissal of the late Engineer, with regard to the water works? The actual cost during his time was very small, because there was nothing except the ordinary pipes.
272. Do you consider that adequate surveys were made, and proper plans prepared, to secure a supply of water before the works were commenced? Yes; it was recommended that a quantity of land should be taken.
273. Have those plans and surveys been revised by the present Engineer? Yes; he is adopting them.
274. Did the Commissioners peruse the contract for the engines before it was sent home? We perused them, certainly, but I do not think we were very great judges of the matter, or much wiser after we did peruse them.
275. The present Engineer pointed out some material omission? Yes, so it appears, but they are corrected; we have answers to satisfy you that the alterations and amendments that he considered necessary are likely to be supplied, and that the engines will do the work that will be required according to the views of our present Engineer.
276. Your present Engineer says, in his letter to you of 28th March, 1856, appended to your second Yearly Report, for 1855—speaking of the contract for these engines:—"On receiving this contract for perusal, I observed that the duty the engines were required to perform was not stated, and the diameter of pump was not given in the specification or plans, and immediately wrote, by permission of your Board, to Mr. S. C. Homersham, C.E., M.I.C.E., to inspect them before shipment; and authorized him, in the event of his finding the engines incapable of raising each 1,500,000 gallons per day, a height of 210 feet, to grant a sufficient extension of time to make them so, under his direction." I understood you to say you had received answers to these letters, stating that the requisite alterations are being made? Yes, and that the engines will perform the work to the satisfaction of the Engineer.
277. There have been considerable modifications of the plans as determined upon by your former Engineer, made by Mr. Bell? Yes, there have been modifications and alterations made by him, but there were considerable modifications made by Mr. Rider himself. It was during his time we advertised for tenders, and it was upon seeing what the enormous expense would be that we requested him to alter the plans.
278. I see Mr. Bell, in his Report of the 28th March, which I have already quoted, says:—"Detailed drawings of the stand-pipe proposed to be erected at Botany, for the purpose of obtaining a column of pressure to deliver water to the highest points in the City of Sydney, were prepared; but I have laid them aside, as wrong in principle and expensive in practice, and am having other plans prepared, which will be less costly to make, and render the working expenses of the engines materially cheaper." You are satisfied that the view now taken by Mr. Bell is the correct view? Yes. Mr. Bell has now only one stand-pipe. He will explain.
279. In sanctioning the alterations which Mr. Bell has stated to be necessary, you think you are taking the right course? Yes.
280. You concur in the opinion that the plan he has laid aside is "wrong in principle, and expensive in practice," and you think that he is adopting the right principle? Yes.
281. Mr. Bell further says: "I found on taking office, that no sections had been made of the ground between Sydney and Botany. I gave immediate instructions for levels to be taken and sections made; this being done with a view of ascertaining and adopting the best line upon which the main pipes should be laid. Hitherto they have been deposited along the Botany Road, where it was intended to lay them along its bends and windings. It will be necessary to make considerable modifications in the plans proposed for the Water Works at Botany, in order to render them less costly, and equally efficient for the purposes required." How do you account for no sections having been made nor levels taken prior to laying down the pipes? Mr. Rider's intention was to lay them along the Botany Road, but sections were not taken of the exact level; at the time he left office they were in process of commencing the section.



282. The pipes have been imported? Yes, a great number.
283. Where were those pipes laid down? Near the Botany Road.
284. Along which Mr. Rider first contemplated their being laid? Yes.
285. What expense has been incurred in laying these pipes along the Botany Road? I cannot say; but there is a return called for which will give the information. Mr. Bell will furnish you with that, but he has shown me that they have been laid down in the proper place.
286. Then your impression is that the City will be put to no material expense in moving them from where they are to their proper position? The line on which they will now be laid down makes the distance shorter, and will counterbalance the expense. In the first instance, when the pipes came out, we were obliged to remove them from the wharves, and they were taken out, by Mr. Bell's directions, to the place where they would be most convenient.
287. Then the pipes were deposited on the Botany Road during Mr. Bell's time? Yes.
288. He had understood from the Commissioners, I suppose, that it was intended to lay the pipes along the Botany Road? I think there were some pipes laid there during the interregnum, before Mr. Bell came.
289. *By Mr. Lang*: Was it not the fact that the line upon which it was intended to lay them down was marshy ground, where it was not possible to lay them down temporarily? Yes, I think so.
290. *By Mr. Egan*: Do you not think that before the pipes were sent for, it was necessary to determine which way the line was to run? No, I think not.
291. *By the Chairman*: I will call your attention to Mr. Bell's expression, "Hitherto they have been deposited along the Botany Road, where it was intended to lay them, along its bends and windings?" Yes, but the—
292. *By Mr. Egan*: How could you determine what length of pipe would be required if you had not fixed the line on which the pipes were to be laid? We only took a certain quantity on account; we knew we should require that quantity at least.
293. *By the Chairman*: You had reason to believe that the quantity you had ordered was not in excess of what will be required? Yes.
294. You think Mr. Bell will give more satisfactory information on this point? Yes.
295. Can you give any estimate of the difference of cost in the present Engineer's plans and those of the late Engineer? There were three plans.
296. I mean this finally adopted by Mr. Rider before he vacated office? No doubt the expense of Mr. Rider's plan would have been much greater; I do not know whether the cost of the last would have been much greater; the first required filters, but, owing to the nature of the ground, they were not required.
297. Do you believe that Mr. Bell would be able to supply a reliable estimate of the cost of these works upon the plan first contemplated by Mr. Rider, the plan more recently adopted by him, and the plan of Mr. Bell himself? I have no doubt he can; he has got Mr. Rider's plans from the commencement.
298. Have you reason to believe that, up to this time, any amount of money has been improperly spent in carrying out the original plans? I do not think there has.
299. You think no portion of the money spent in carrying out the original plans will be ultimately wasted? I think not. There may be some difference in lifting these pipes, but we were obliged to deposit them somewhere.

G. Elliott,  
Esq.  
13 Nov., 1856.

TUESDAY, 18 NOVEMBER, 1856.

Present:—

MR. EGAN,		MR. PLUNKETT,
MR. GORDON,		MR. ROBERTSON,
MR. JONES,		MR. SCOTT,
MR. LANG,		MR. WILSHIRE.
	MR. OXLEY.	

RICHARD JONES, ESQ., IN THE CHAIR.

Gilbert Elliott, Esquire, called in and further examined:—

- By Mr. Scott*: I believe you stated in your previous examination that the Commissioners acted jointly—that they had no separate departments? We did not tell ourselves off into any separate departments.
- I believe there are only three Commissioners? There were three, but now there are only two, Mr. Rae and myself.
- Mr. Rae has superintended the sewerage works as much as yourself and Mr. Darvall, and you have looked after the accounts as much as Mr. Rae? Mr. Rae took the more immediate charge of the accounts, as he was more conversant with them, not because this duty was particularly placed upon him.
- I see that you have paid nineteen shillings a ton for road metal? Yes.
- Whereas the City Corporation, just previously, got it at six shillings and sixpence to seven shillings—how do you account for that difference in price? I do not know what the City Council got it for, but we advertised for tenders, and we took the lowest tender we could get; it includes the quarrying, carting, boating, and laying down upon the wharf. I do not know what the price named by the City Council included, but this included every-thing.

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6. In disposing of the Market Stalls, what object have the Commissioners, or the Government, in letting them to the highest bidder—is it merely to raise the revenue? To raise the revenue—I do not quite understand your question.
7. I should have thought that the object of a public market would be to supply the poorer classes at the lowest possible rates, but now they have become little shops in the hands of persons who keep shops in other parts of the town. Is it an advantage to raise revenue to the loss of people who go to market to buy a good and cheap article? The rent of the stalls was suggested by the stall-holders themselves.
8. Why did the Commissioners agree to that—they do it to have a monopoly? No; we did it to let the markets to the best advantage, and to accommodate the public as much as we could do.
9. I can hardly agree to the principle? It was to derive a revenue from it, and to accommodate the public.
10. In looking over the analysis of the tenders, attached to Mr. Rider's evidence before the Committee of last Session, I find that Mr. Randle's is much the lowest, being only £54,870? Yes.
11. Have you made any calculation what these identical works have actually cost? There will be an exact return given to you; it was ordered by the Chairman, and I have ordered the Engineer to make out an account of the actual cost of the works, so far as they have gone.
12. I do not mean the whole section, but simply the main sewer, and the sewers in Pitt, Castlereagh, Elizabeth, Phillip, and Macquarie Streets? That is the whole section.
13. That has cost more than double the estimate? Yes. I think the last time I was examined I mentioned £116,000; I think that is what it will cost.
14. Did the Commissioners ever make any inquiries, after seeing this fact that it has cost more than double the estimate, why it was so? The calculation was made with the expectation that we should go through a great deal more soil than has been the case, whereas the greater part of the excavation has been through rock.
15. That is Mr. Randle's rock; because I see that in the Report of Messrs. Blacket, Hume, Lennox, and Houson, dated 1st December, 1855, there occurs this passage: "This kind of soil is very common in the southern parts of Sydney, and has often been cut into and excavated for a great variety of purposes, and speaking of ordinary usage, and of our own knowledge, without reference to this particular contract, we cannot consider it to be 'rock.'" This is from the general Report of the Board appointed to examine the sewers, either by the Government or the Commissioners, I do not know which? No; it was appointed by the Committee of the Legislative Council. In answer to that question, I beg to say, there has been a Commission appointed by the Government to examine into these matters, and they have agreed in all we have done, with regard to rock and soil, and thought we had come to a proper adjustment of the question. And we not only have the report of this Commission in opposition to the report of the Board you have named, but we have also the report of our own Engineer, Mr. Bell, who came immediately after the other Engineer, Mr. Rider, had left, and who would, probably, not be too willing to uphold his predecessor; and he said we could not have come to any other adjustment of the rock and soil question.
16. It is not only that they find fault with, but they think there was no necessity for so much tunnelling: "We have to state our opinion that there is no reason why so large a portion of the work should have been tunnelled, as open cutting is not only far less costly, but affords greater opportunity for performing the brickwork in a proper manner, and would allow the sewer to be better and sounder backed up, and would have given better opportunity of inspection." And Mr. Blacket gives his opinion to the same effect in answer to the fifteenth question of his evidence: "Is it your opinion that Pitt, Castlereagh, and Elizabeth-streets, should have been excavated by means of open cutting from Market-street to Bathurst-street? Yes, I think so; I cannot see any advantage from the drift?" We took every precaution, made every inquiry, and considered that tunnelling was the best way to get through that street, Pitt-street, as it is a great thoroughfare and there is an immense deal of business done in it; an open cutting would have completely taken up the whole street. Then there is another point to be considered, that through the whole of Pitt-street there is a large nine-inch water main, with service-pipes along its whole length, forming, together with the gas-pipes, a complete network of gas and water pipes; and the damage that would have been done would have more than counterbalanced the saving of expense. At all events, we took every means of ascertaining what would be the best method of proceeding. We were guided by our Engineer, and we could not take upon ourselves to go in opposition to what he said.
17. Mr. Lennox says in his evidence, : "I will just make one observation, that it is the best strata I ever saw for open cutting, because it will stand as firm as rock, and it is not hard to dig." And with respect to the same question of open cutting some other person gives evidence, and says it would not have stopped the traffic of the street if done in a careful manner? I cannot conceive how that could have been the case, because it has been done by open cutting in Castlereagh-street, and we have had many complaints, although that is not by any means a frequented thoroughfare, and there are no shops there. In Pitt-street the whole business of the shops must have been stopped if the street had been open cut.
18. I see, by this analysis of the tenders, that for the same quantity of tunnelling through rock, the cost according to Mr. Randle's tender would be £50, Mr. Murphy's £25, Mr. Farelly's only £7, and Mr. Inder's £35; did the Commissioners make any inquiries as regards the great variation in these prices? We made no inquiry as to any one particular price in the schedule, but we decided upon the average of the whole.
19. It must have struck the Commissioners that this analysis was clearly an erroneous one? No.
20. Instead of £54,870 the work has cost £116,000? Yes, that is seen now since the work has been done.

21. Has it not struck you that Mr. Randle, to make it pay, has put in everything cheap but the tunnelling? No. I can only say what Captain Ward said when he gave it as his opinion that the only true business-like estimate given in was Mr. Randle's. I beg to say that I never saw Mr. Randle nor one of the contractors before the contract was taken.
22. I do not attribute any improper motive—I merely wish to know why Mr. Randle, who tenders for many things at mere nominal prices, does everything by tunnelling, for which he charges an enormous price? The analysis was made on the assumption that there would be a great deal more soil than rock.
23. Why was Mr. Randle allowed to tunnel through everything in that way, to increase the expense some sixty thousand pounds? It was not done to increase the expense, but because we thought it was the best way of doing it. We gave evidence last year upon that point, and, to the best of our belief, we have taken every means to ascertain whether it was proper to tunnel or to open cut every part where the question had to be decided.
24. I think you stated that you looked almost entirely to your Engineer? Unquestionably it was recommended by the Engineer. We are appointed under a certain Act to do certain things, but it is not pointed out how we are to do those things; it is left to our own discretion and judgment. We appointed an Engineer, as all other Commissioners of Sewers in England have done, and were guided by him, and according to all the books I have read upon the subject, the Engineer gives advice, and the Commissioners follow his advice. In fact we have no other means of acting. On many occasions I have asked other Engineers for their private opinion, but that opinion they were unwilling to give, and whenever any of them did give an opinion it was an evasive one. I can only say, that although I have been in the civil and military service forty years, I have never gone through such an ordeal as during the three years I have filled this office. Everything I have done has been questioned, improper motives have been imputed, and I have been harassed night and day.
25. Mr. Rider was your Engineer? Yes.
26. Has he got his testimonials with him? He has.
27. The Committee of Inquiry frequently recommended his dismissal? No; in the last Report they did.
28. You saw cause not to comply with that Report? We did comply with it.
29. At the time? No; we did not dismiss him at once.
30. You still continued him in his Office? He continued with us a month or less after that. We did not dismiss him on the spot, if that is what you mean.
31. You did not make inquiries with regard to his general character—whether he was a person particularly sober, and attentive to his duties? As for sobriety I never up to this moment heard a word against him. Our reason for getting rid of him was, that we found him careless and inattentive to his duties. It was on that ground we discharged him, on our own responsibility.
32. In Mr. Randle's contract with the Commissioners, I believe it is mentioned that it was his duty to send in accounts of the work performed at stated periods? Yes.
33. Did he ever do so? Yes, he sent in his accounts, but not regularly at one time.
34. Did he ever send them? Yes.
35. Did he ever make out his own accounts and send them in? Yes; we have them in the office.
36. In reading Mr. Randle's evidence my impression is, that he did not send in his own accounts, he took Mr. Mais' or Mr. Rider's? He took them sometimes I believe, but it was to his own prejudice if he did.
37. I am not talking of prejudice, but there was a contract and it ought to have been fulfilled—it was Mr. Randle's duty to send in those accounts, and it was the duty of your Engineer to check them? It was not reported to us that he did not send them in.
38. Did you feel justified in paying any account without seeing it? We paid the accounts on the certificate of the Engineer that a certain amount of work had been performed. Such was the contract.
39. Did it never strike the Commissioners that it was singular that their own Engineer should make out the account of the Contractor and certify it? They measured it together.
40. Perhaps they ought not to have done that? That is the custom in all works of the same kind, I believe.
41. *By Mr. Egan*: Previous to any payment made to Mr. Randle, did he ever send in any account at all? Mr. Randle did hand in accounts, quarterly accounts. I can only say this, that I believe the accounts were not sent in regularly, but they were sent in. We were satisfied upon the quarterly payments that we were under-paying Mr. Randle, that we always had a balance in hand.
42. *By Mr. Scott*: We know that Mr. Rider or Mr. Mais certified that Macquarie-street contained more open cutting as well as tunnelling, than the whole length of the street by some 90 feet? That was a clerical error.
43. Amounting to some £3,000? Yes, that was made.
44. At the time of this inquiry? No, before this inquiry. Previous to Mr. Bell's coming, every error was corrected that had been discovered.
45. Mr. Bell came after the inquiry, and he found out another nine feet short, making £360? I don't remember that he did. Mr. Bell, I think, told me that they came as nearly as they could come.
46. However, the £360 was the second notification of an error? You mean the quarterly payment.
47. I am talking of the measurement of Macquarie-street? Is it the fortnightly or quarterly payments.
48. I am not alluding to the payments at all, but to the custom of your own people in measuring the street for Mr. Randle? At this moment I do not know what you are alluding to, or the place, but Mr. Rae is prepared to go all over it, and so is Mr. Bell. The latter could explain the certificates better than I can.

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49. Do you remember that it was certified that there were 480 or 460 junction collars in Macquarie-street, which were afterwards reduced to 90, then to 61, and again to 57—Mr. Bell's was the last? Yes.
50. When was the alteration from 90 to 61 made—after or previous to the Report? Previous. I think I mentioned last time that there was some excuse for Mr. Mais, because he was constantly before the Committee, his mind was harassed, and he did make clerical errors; but I still say I do not believe Mr. Mais made any error from a dishonest motive; I conscientiously believe that to be the case.
51. I understood you to say that Mr. Mais made this alteration previous to the inquiry? No, previous to the Report.
52. Was this immense error of £3,000—an error against the Government—rectified or found out to be an error previous to the inquiry, or was it suggested to Mr. Mais to go over the work? That inquiry commenced almost simultaneously with the sewers, and it was during the progress of the inquiry that errors were made and rectified.
53. Macquarie-street must have been almost finished, because they talk of "tunnelling"? I cannot tell you the date of that, for the inquiry lasted over six months.
54. It appears to me that the inquiry made Mr. Mais go over the work again? I do not think so; I think Mr. Mais corrected his accounts in going over the quarterly measurements, under our instructions. We were kept in the dark of what the Committee was doing.
55. Have you examined the works that have very recently been completed in the sewers? Very often.
56. Did you examine personally the first of all that were commenced? Yes.
57. Do you consider that they are alike in quality, or that there is a marked difference between the work done now and what was done then? I am no judge myself, but I should not say there is a marked difference. The rendering is better now, in consequence of having a better way of keeping the water out; but all those that had been rendered previously were rendered over again, to make the rendering good.
58. All that had been found out? I hope you do not mean to say that I should have passed over any thing of the sort.
59. If you knew it you would not, but I do think Mr. Rider has been negligent in his public duties? I do not hold Mr. Rider up.
60. I do not suspect you, or any of the Commissioners, of being guilty in any way whatever, but I do think Mr. Rider has been negligent, if not worse than negligent.—I think you stated that nightsoil was moved to the sand hills? Yes.
61. What sand hills? Beyond Botany-street, on Surry Hills.
62. Is there not a great drainage from there to supply Sydney with water? No; it will not interfere with that.
63. Will the different "necessaries" and such places discharge the contents into the public sewers? Yes; they will eventually come into the public sewers through service drains.
64. The whole of Sydney? The whole of Sydney.
65. I see that the largest sewer is six feet, I think? Yes, six feet.
66. I see that Mr. Bell, or some one else, states that that is more than sufficient for the area to be drained? Yes; he considers it is more than sufficient; it will do it well.
67. Has that opinion reference only to the quantity of rain-water that may fall, for it is abundant for that; but when the sewer is choked up with all this filth will it be quite sufficient? Yes, quite sufficient. It was always a recommendation of the late Committee that we should make the sewers larger than necessary.
68. *By Mr. Plunkett*: What office did you hold before you became Chief Commissioner? I held the office of Sheriff for four years.
69. Did you make application for the Chief Commissionership? I did not.
70. In what way was it offered to you? The Governor sent for me, and offered it to me. I was very unwilling to take it, and requested him to appoint some one else; I suggested whether it would not be better to appoint a person of practical knowledge of engineering. The Governor said he did not agree with me; he thought the Commissioners ought not to be Engineers, but should depend entirely upon their own Engineer. I said that it would cast great responsibility upon us, and he said that he did not consider it our duty to superintend Engineering matters, but to appoint a proper Engineer for the purpose.
71. You understood that was the view of the Government of the day? Yes. I refused to take the appointment so far, that I said I would not take it at once, and asked time to consider; he said he could allow me very little time, not more than twenty-four hours, but he wished me to take it; and under those circumstances I took it.
72. Were you aware that it was offered to Mr. Cowper, the present member for the City? I was not aware of it before it was offered to me, but I have since learned so.
73. Have you made any calculation as to the difference in expense between tunnelling and open cutting? There have been calculations made, but I do not know at the present moment what they amount to, but I believe you will get that information from the Engineer. I may state that, upon my first examination, two years ago, my statement then was that it was estimated the expense of the sewerage of the City would amount to £359,600. That statement was made two years ago, and has been printed; and it will be within the knowledge of the Council that no objection was made to it. That sum will, as I am informed now, make the sewers for the whole city.
74. In taking the contract, what difference in price was there between the open cutting and tunnelling in the measurement? It is mentioned in the contract; you must always take that with reference to the depth; when it comes to a certain depth, open cutting is more expensive than tunnelling.
75. When did the tunnelling first commence? At once; the ground was such as required to be tunnelled.
76. What was the date? I believe it commenced in Macquarie-street first, near Fort Macquarie.
- 77.

77. Can you recollect the date—(my object is to fix the date of the commencement of the work, and to compare it with the inquiry)? I can only speak from recollection, but I think the first turning of the sod took place in the end of April, 1855, but that was merely a sort of commencement; I think the first payment (which would be a better guide) was made to Mr. Randle in June.

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78. I find the Committee was moved for on the 12th June, 1855? Yes.

79. How long before that had these tunnelling works commenced? A very short time before that; I can hardly charge my memory. When I was examined here on the 13th July, the only part done was Bridge-street, and they had commenced New Pitt-street, and they were going on with the shafts in the main sewer.

80. I apprehend that that inquiry pointed your attention, and that of your brother Commissioners, to many things that would have been overlooked if it had not been commenced? They pointed our attention to many things, but I do not know that they would have been overlooked.

81. So far they assisted you? Yes. They recommended a greater number of Overseers than I thought necessary, but we followed out their views, and appointed some more Overseers.

82. By your contract with Mr. Rider, could you have dismissed him at once, on the Report of the Committee, without being satisfied yourselves that you had sufficient to justify you in a Court of Justice? I do not think we could; we gave him a certain warning, which we considered we were bound to do.

83. You kept him in office about a month? Hardly so much; we gave him warning shortly after.

84. Have you reason to be satisfied with your present Engineer? I think so, very much indeed.

85. Did you exercise the same caution in employing Mr. Rider that you did in employing Mr. Bell? Precisely the same.

86. I mean with regard to his credentials of competency? Yes. We had fewer applications at the time of Mr. Rider's appointment than we had at the time of Mr. Bell's. The very first instructions that we gave to Mr. Bell, on his coming into office, were to examine and see that the works were properly done, and also to see whether they were properly planned; and with regard to the sections of George-street, we requested him to see whether the proposed expense of that (for it was only a proposal) could be in some degree reduced; and he reported that we could do without a main sewer in George-street.

87. Did you ask him to review the works and plans of his predecessor? Yes, to review the works and plans of this section—it was the only one in operation at this time; but we told him the proposal, and asked him whether he could not make it less expensive, and he reported as I have said.

88. What would be the expense of that? It is in his report, and he will tell you clearly. It does not altogether obviate the necessity of a sewer in George-street; for the north end of George-street will require a small sewer, which will come out at the Queen's Wharf; that is the intention.

89. *By Mr. Egan:* Was not the present City Engineer employed in the department under Mr. Rider, during the time this work was in progress? No; he only arrived in the country in January; I do not think he was in the country a fortnight before we heard of him.

90. Shortly after the appointment of Mr. Rider, did not the Commissioners enter into some contract for the purchase from him of a brickyard and materials connected with it? Towards the end of 1854.

91. While he was an officer of the department, you purchased a brickyard from him? Yes.

92. For some time you carried on the business of brickmaking? We did ourselves.

93. With what you purchased from him? Yes.

94. There was some part of the contract for the sewerage in which you were allowed to supply bricks to the contractor? We did supply them, at the market price.

95. In the transaction of purchasing, making, and selling the bricks, did you meet with any loss? Upon the whole there will be a loss, but Mr. Rae can give you correct information on that point, as he has more particularly managed the accounts.

96. How long had Mr. Rider been employed by the Commissioners before this sale of his property to you? Some six or eight months, and it was taken at a valuation; the property was valued by Mr. Cowlshaw.

97. Can you say whether any of the bricks made at this establishment, before it became the property of the Commissioners, were supplied to the department for any of the works? Certainly not, to my knowledge. In fact, I did not know that Mr. Rider made bricks for a considerable time after he came into office.

98. With reference to the tenders for the sewers—can you say whether the Commissioners had any description of the nature of the soil in each street to enable them to arrive at anything like a just conclusion what the expense would be? No; we had not. We had a conversation with the Engineer upon the subject, and we asked the question as to what strata he considered we would go through.

99. That was the guide of the Commissioners in accepting a tender? Yes.

100. Then there was no particular information given to parties wishing to tender in reference to the nature of the soil in any street the sewers would pass through? No.

101. They would have to get at it at haphazard? No; no contractor would have taken such a view of the matter; he must have judged for himself.

102. It would have been a guide, would it not, to have said that in such a street there will be so many feet of open cutting and so much rock? I do not think we were in a position to give information of that sort; we did not know, till we went on, the nature of the soil.

103. Do you not think it was necessary to ascertain *that* before the contractor went on with the work? I do not; it was done by a schedule of prices.

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104. Mr. Mais had, I believe, the sole superintendence of that work, or, if he had not, was the only man who ever was there? The Engineer was there.
105. Did you ever know the Engineer to go down and examine the work previous to the inquiry? Most unquestionably I have seen him down, and he has been down with me.
106. Then Mr. Mais had not the sole superintendence of the work? Decidedly not.
107. Can you say whether Mr. Mais was not the person who measured the work for the certificate which enabled Mr. Randle to get payment? He measured the work for the fortnightly payments, but Mr. Rider was there also; he did not hold the tape or the line, but he was there.
108. Whenever Mr. Randle's account was sent in, the quantity was previously ascertained by Mr. Rider, as well as by Mr. Mais? Yes; the account was signed by Mr. Rider, and certified to as correct.
109. Can you say whether the measurements which enabled Mr. Rider to give the certificate upon which you made the payments every fortnight, were not taken from this measurement book which Mr. Mais refused to hand over? The measurements were entered in the rough in that book, but it was copied clean; they could not take the clean book down the sewers; that is open to the Committee or any one.
110. I wish to know whether, as this book enabled him to give the certificates of the measurements, you did not consider it was the property of the Commissioners? I considered that the clean book that was made out, signed, and certified by both Engineers, was what we had to look to.
111. Then the Commissioners did not trouble themselves to ascertain whether the fair copy was a correct copy of the rough book? I might have examined it till doomsday, but it was put down in such hieroglyphics that I could not have understood it.
112. *By the Chairman:* You mean a sort of professional shorthand? Yes.
113. *By Mr. Egan:* During the time these fortnightly payments were going on, was any account at all ever sent in to the Commissioners by Mr. Randle for work done during any fortnight? I believe there was. I know there have been accounts given in, but I do not know the dates.
114. If you had the certificate of your Engineer that there was so much work, you would pay for it, although Mr. Randle had sent in no account at all? We took it for granted that everything was complied with when the Engineer certified that a certain amount of work was done according to contract.
115. You do not know whether these measurements took place with your Surveyor and Mr. Randle, and that Mr. Randle agreed to the measurements before he applied for the money? I never made the inquiry; but, of course, I knew that all we paid was upon certificates given to us and signed by our Engineer.
116. Not by Mr. Randle at all? If Mr. Randle had sent in an account, it would have been checked by our Engineer's certificates, which were placed before us as correct.
117. Mr. Randle did not come to you and say, here is the account? He had to do with the Engineer, and upon his certificate we paid the money.
118. This certificate was never given by Mr. Randle? We did not want a certificate from Mr. Randle.
119. Mr. Randle never made out an account accompanying each certificate? Yes, he did; I do not know how many.
120. He did not make out an account accompanying every certificate as he gave it in? It did not come within our knowledge.
121. You said you did not know whether the work or the material was better now than before? I said before that I was no judge of work, but it appeared to me to be about the same.
122. Have you been in Castlereagh-street during the time the work has been going on lately? Yes.
123. Did you notice any difference in the bricks used in the work going on now and the work done before? I considered the bricks in the previous part of the work as good generally as those used now. I am told there are some soft bricks, but they are in a very small proportion of the work.
124. Who attends to the work in Castlereagh-street? Wherever there is a place open there is an Overseer, but I can give you a return of all; I think there is an Overseer wherever there is work going on. We did increase the number of our Overseers, in consequence of the recommendation of the Committee.
125. Mr. Parker is not an overseer of yours? He is Mr. Randle's Clerk of Works.
126. Do you know the part of the sewer that has been done in Castlereagh-street, and has been found defective, and taken up within the last two or three days? It has not been reported to me.
127. Opposite my door and Dr. A'Beckett's they have been taking up the material? In one part of Castlereagh-street, since the last rain, a spring burst out;—that was reported to me, but I do not know whether the sewer was taken up; it was a very extraordinary occurrence; a spring burst out at the side of the sewer, but Mr. Bell told me it was quite stopped off.
128. *By Mr. Robertson:* With reference to the contract with the contractor for these sewers, what means have you to determine what should be paid for as rock—was there any principle laid down? It depended upon the strata, upon how it was mixed, and the quantity of rock there was in it.
129. Who determines those points? The Engineer and parties supposed to know; and they recommended that certain ground should be two parts rock and one soil, or half rock and half soil, as the case might be.
130. When you say the Engineer and parties who are likely to know, who else is there besides the Engineer? After there was a discussion raised about it, we employed a mining engineer from Newcastle, expressly to examine it, and his report tallied with what was done; I allude to Mr. Plews.

131. Then there was some check upon this matter, as to which should be charged for as rock, and which as soil? Yes; it was done by regular calculation and examination.

132. I think I remember something in the evidence—I have not seen it since I have been a member of this Committee—I think I remember something in the evidence, where it was laid down that sand was rock; would you act upon that principle? No; but everything I believe is rock, geologically; it was done by regular examination.

133. In making the contract, had you any provision so that there could be no misunderstanding as to what you should call rock or what you meant by rock—it appears to me a necessity? There were only two things mentioned, soil and rock; and the proportions of either were determined as the work went on.

134. Supposing they were mixed, was there an altered price? When they were mixed, it depended upon how they were mixed; if we thought there was less soil than rock, it was charged for as more rock and less soil; and if there was less rock than soil, it was charged as more soil and less rock.

135. There was no principle—it was a kind of rule of thumb, as to which was to be rock and which soil? It was always decided at the time, by observation of what the soil was. In fact I think, as far as I recollect, in most of the specifications I have seen of different sewers, rock and soil only are mentioned.

136. Was there not an enormous difference between the cost of soil and rock? Yes.

137. In tunnelling? Yes, in both there was a great difference.

138. There was nothing in the contract to define what should be considered rock? No; it merely mentioned rock and soil.

139. *By Mr. Lang:* From what I see in some of these reports, there seems to be a certain understood rule of practice among excavators and contractors, as to what they shall call rock, and what soil? Yes.

140. I suppose when you entered into this contract with Mr. Randle, it was understood that what you meant by rock and soil was what was understood by contractors to be rock and soil, not by the geological, but by the practical name? Yes.

141. *By Mr. Robertson:* In answer to Mr. Lang, you say there was some understanding about how this was to be charged? There was no understanding previously to the contract being taken, but an understanding was arrived at as we went along, that such and such particular materials should be called rock or soil, or rock and soil mixed, and be charged for accordingly.

142. That was an understanding by the subordinate officers—not between the Commissioners and the contractor? No; it was recommended by our officers that such and such parts of the street should be charged for as two or three parts of rock to one of soil, or whatever the fact might be.

143. You have said also, that you have money of Mr. Randle's always in your hands; will you tell us what means you have of knowing what is the amount? We always find that we have a considerable balance over and above what we have paid on certificates.

144. I think you stated the other day that the certificates were very often erroneous? But there was a large balance. We never paid within £3,000, and we always had £1,000 in hand of Mr. Randle's, in lieu of a bond, which he paid over at first starting.

145. How could you possibly have known whether you had one thousand pounds or one thousand pence in hand? If the certificate was for £10,000, we only paid him £7,000, or as the case might be.

146. If a certificate stated 480 instead of 57, could he not be much overpaid? No; those junctions were only charged at four shillings each. We used to look very much to the figures, and if the amounts were large and startling we used to make inquiry. 480 junctions would not make a very large amount—only so many times four shillings.

147. Was there no great mistake as to the measurement of expensive works? No. In one street there was some 60 or 80 feet too much excavation; they took the length of the street and made a mistake.

148. That mistake was in favour of Mr. Randle, was it not? Yes. It was corrected in the next certificate.

149. Were there any other mistakes in Mr. Randle's favour? Yes, there were.

150. More mistakes for him than against him, were there? Yes.

151. You have mentioned that you paid these moneys to Mr. Randle without having his accounts—is that usual? We considered it perfectly consistent to pay these accounts when we got certificates from our Engineer. They have agreed, as far as I understand; the accounts correspond.

152. Did it not occur to you that one would be a check against the other? You must understand that Mr. Randle had agreed to these accounts before they came to us; he had made them out to be correct.

153. Is it not usual, in all arrangements with a contractor, that the party performing the work should send in his account before receiving payment? We did not see it necessary to have anything from Mr. Randle, but we got the certificates from the Engineer, believing he was satisfied.

154. Does not the absence of Mr. Randle's accounts put you in this position, that you cannot hold Mr. Randle at all responsible for these measurements? He is not responsible, but the Engineer is.

155. He should also be responsible? No, I think he should not; but he is paid according to—

156. Do you not think a person undertaking work of this kind would measure it himself? Yes, he did so, as far as I knew, and was satisfied the Engineer was correct.

157. If you had had Mr. Randle's accounts sent in, you would not have had these improper measurements? We were not aware that Mr. Randle's accounts were not sent in to the Engineer.

G. Elliott,  
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Esq.  
18 Nov., 1856.

158. You are aware that these accounts were not sent in? Not regularly, but he did furnish accounts—I cannot say how often.

159. You did not think it was objectionable not to have these accounts? I did not see it was objectionable.

160. You do now? No, because the Engineer measured these streets; they measured together, and whatever Mr. Randle's account might have been we must take the Engineer's as the correct one.

161. Did it not occur to you, as trustees of the public moneys, that you should not only use the checks you would have in private affairs, but exceed them? We had reason to believe that Mr. Randle was satisfied, and where they measured together and corresponded, it was only idleness on the part of Mr. Randle in not sending in his accounts. We were justified in paying upon the certificates of the Engineer, and I do not see how Mr. Randle's accounts were to put us in a better position.

162. Would it not put you in this position—that in the event of its being discovered that there was any improper procedure or any fraudulent practices between the Engineer and Mr. Randle—that it would place you in a better position to fix that fraud upon the contractor? If there had been any fraud between the contractor and the Engineer they would have arranged it whether these accounts were sent in or not.

163. You misunderstand me—I say would you not be put in a better position for fixing fraud upon the contractor if you had not only the Engineer's measurements but the contractor's before you, because then both would have concurred? We had his quarterly accounts made up by himself, which embraced the whole of his fortnightly ones, and which were the correcting accounts.

164. I suppose you would not think it improper to guard against any frauds of the nature I describe? We guarded in every way we possibly could; I do not know that we omitted anything.

165. Had you, in general, reason to suppose that there was some secretly improper arrangement subsisting between the parties acting on behalf of the Government and the contractor or sub-contractors, or any parties acting for them? Most decidedly, most conscientiously, I believe it not to be the case.

166. *By Mr. Egan*: I want to ask whether there was any work reported by any of your officers to be through rock, or rock and soil, which afterwards turned out upon further examination not to be the case? I do not think there was; I cannot remember; I think it was all settled according to—

167. According to the certificates given at the time? According to arrangement.

168. The certificates, I presume, said so many feet of rock and soil? I can hardly tax my memory with that, but my impression is that such was the case.

169. You do not think anything reported by your officers as to the nature of the soil turned out to be the reverse afterwards? I think not; there might be some trifling cases of error, which were altered afterwards.

170. Was either Mr. Mais or Mr. Rider dismissed? We told Mr. Rider we had no further use for his services.

171. With reference to Mr. Mais? With reference to Mr. Mais, he was not dismissed; but he was told that it would be better he should resign, both because we were getting a new Engineer, and from the mistakes that had occurred; but we had no idea in any way that Mr. Mais was dishonest; so much so, that he was employed as draughtsman afterwards.

172. He was employed for three or four months after the Report of the Committee was made? Yes.

173. You said you had no reason to suspect him or to doubt his integrity? Certainly not. In some things he was careless; he was harassed in mind and body; but he corrected his errors himself.

174. *By Mr. Lang*: As you did not make a final payment to Mr. Randle, but only paid him on account, I suppose you looked upon his account as an open running account? To the end of the quarter.

175. These measurements that Mr. Mais made fortnightly were looked upon merely as an approximation? Yes.

176. And at the end of the three months Mr. Randle rendered his account, and this rough measurement of Mr. Mais was corrected, and so corrected Mr. Randle's account? Yes; they were compared at the end of every three months. The object of that was to get a correct statement, and also that the deduction of ten per cent. should not become so large in amount as to be inconvenient to the contractor.

177. Then this was systematically done every three months? Yes; there were generally other persons put on to make the measurements correct.

178. You say that none of the Commissioners were professional Engineers? No.

179. When Mr. Rider drew out his plan for the City Sewerage, involving, as it did, upon the whole an expenditure of £359,600, and knowing, as you did, that any mistakes in the levels, or in the capacity of the drains, would lead to serious consequences,—did it ever strike the Commissioners that they should have had those plans tested and examined by Engineers of standing, before commencing the outlay of such an amount? We had nothing to authorize us, nor, in my opinion, could we do it. We were told when appointed that we must appoint the best Engineer we could, and put the responsibility upon him. We had no one to apply to. I did apply to several privately, and the opinion I got was always an evasive one.

180. Professional men would not give an unprofessional opinion about a man of their own profession? No; and the Act points out no way of getting out of the difficulty, but leaves us to our own discretion.

181. So that you had no resource but to trust to the Engineer you had fixed upon? Just so. In examining me the other day about the plans, some remark was made about Mr. Bell not finding sufficient plans in the office.



182. *By the Chairman:* I referred to Mr. Bell's report? There were sufficient working plans for all the streets.

183. For all the streets in the section upon which you have entered? Yes. The plan Mr. Bell refers to, which I was not aware was necessary, is the cross section of the open cutting, showing the open cutting from the top, to show the slope. I did not understand that it was necessary.

184. *By Mr. Oxley:* I asked you the question upon the previous occasion, whether you had sufficient plans of the sewers before you commenced—longitudinal plans? My answer to that, I suppose, would be, that there were plans of the section at present in progress.

185. Your answer was, that you had plans of the sections? Yes, of the streets in which the sewers were going on.

186. You said just now that you could not decide whether there should be open cutting or tunnelling, because you did not know the depth from the surface? I think I did mention the depth, but that is pretty well ascertained by the survey.

187. If Mr. Rider had had specifications and plans to lay before the Commissioners, they could have told at a glance how many feet of tunnelling and how many feet of open cutting there should have been? No; I do not think so.

188. Do you not think you should have so far examined his plans and specifications? We did examine them, and whenever he pointed it out, we gave instructions for the work to be done by tunnelling or open cutting.

189. His plans were sufficiently explicit to show the precise number of feet of open cutting or tunnelling? No; they did not state that.

190. Then what rule guided you as to whether you would tunnel or make an open cutting? The thoroughfare, the nature of the soil we went through, whether it was easily tunneled, and also the position of the water-mains and gas-mains, and the convenience of the public.

191. Did you not take those circumstances into consideration before you commenced the sewerage works at all? No, as we came to them.

192. In calling for tenders, was there no explanation on the face of the specification as to what amount of tunnelling there would be in the whole of the sewerage? No; the contract was upon a schedule of prices.

193. Was it open to you to stop the contractor; for instance, when he was engaged in open cutting, and to say "you shall make so many feet tunnelling"? Yes, we could make such alterations as we might think best from time to time.

194. Did you not conceive it to be your duty as a Commissioner to receive a bill from the contractor every time you made a payment—prior to making such payment in order that your Engineer might certify to the correctness of the bill? We did not pay upon a bill, but upon the certificate of our Engineer. The only thing we paid upon was the certificate of the Engineer. No doubt, according to the strict reading of the specification, the contractor ought to have rendered a weekly account of work put in hand.

195. By the terms of the contract the contractor was bound to render an account before he was entitled to receive payment? He was of the work put in hand, but we had no reason to suppose he did not. The certificate was handed to us by the Engineer, and upon that we paid.

196. You say you had no reason to suppose that the contractor did not furnish his bill every fortnight? It never came before us, and it will be seen that the contractor was not bound to send in such a bill.

197. Do you mean that he did not furnish it? No; I mean that we did not receive it.

198. Who did? The Engineer.

199. Did the Engineer receive the bill and pay the money? No; a measurement was made every fortnight of the work done, and a certificate was given by the Engineer that such work was done—upon that certificate we paid the money. My understanding is, that is the universal way in which Commissioners of Sewers in all the large towns of England carry out their works.

200. You presume that a bill was furnished by the contractor, but you know nothing as to its being furnished—as you were the persons with whom the contract was made, to whom was the bill furnished? It ought to have been given to the Engineer.

201. You were the parties who entered into the contract? Yes, and we paid money on the certificate of our Engineer, but we only paid upon account.

202. Seeing that you were dealing with public money, and——? I dealt, Sir, with public money as I would have done with my own.

203. Seeing the amount of responsibility you had upon your shoulders, and knowing that according to the contract entered into with you as makers of sewers, you were bound to have a bill for every foot of sewer formed before payment for such work should be paid, you yet say you are not aware whether any bill was rendered? It was rendered quarterly.

204. But upon every individual payment? I say again I did not think it was necessary if we paid upon the certificate of the Engineer. We saw that we were not paying more than we were authorized to do by the amount of work performed. I grant you that we did not act strictly according to the words of the contract with respect to the weekly account for work put in hand, but I do not think it bears upon the correctness of our payments.

205. Was it not very possible if the bill were furnished to your Engineer before it were rendered to you, for him to make his return coincide with the bill—was it not the duty of the contractor to furnish you with a bill in order that you might refer it to your Engineer to certify to its correctness? Then you suppose fraud to take place?

206. Yes? If fraud were intended, there must be an understanding between the Engineer and the contractor.

207. Yes? Then if the Engineer were inclined to act fraudulently he would make his account tally with the contractor's; but the certificate of the Engineer, I understood, was the deciding thing.

G. Elliott,  
Esq.

18 Nov., 1856.

- G. Elliott,  
Esq.  
18 Nov., 1856.
208. When Mr. Randle or the contractor furnished you with a bill of the work done, you could only prove the genuineness of that bill by referring to another individual—did you not consider it to be your duty, in the first instance, to receive a bill from the contractor, and, without shewing it to the Engineer, refer to the Engineer to check it? Certainly not.
209. You kept no check upon the measurement of your own Engineer, and the measurement of the contractor? We had quarterly measurements, and we employed upon those measurements persons who were unconnected with the sewers. We took every precaution.
210. With the exception of having fortnightly accounts from the contractor? That did not strike us in the same light as it does you, that it was necessary—nor does it do so now. If we were to trust our Engineer we had his certificate.
211. *By Mr. Scott:* I see in the examination of Mr. Randle before the Committee of last year that he read a portion of his contract, thus:—"Within seven days from the expiration of the 30th day of March, the 30th day of June, the 30th day of September, and the 31st day of December." These are the periods on which the quarterly accounts should be sent in—do I understand that he did send in his accounts every three months? Yes, to the best of my recollection.
212. Because in the 130th question I see it is asked, "If the Committee have been informed by Mr. Darvall, one of the Commissioners, that you never sent in such a bill, is that correct?" That refers to the fortnightly accounts; I know we have the others in our office.
213. Mr. Darvall says not, and Mr. Randle after saying "Yes" and "No" says he never did? You will find that they are in the office.
214. Mr. Randle says he sent in a letter, just a claim for a lump sum, but that he never sent in a bill? Money is paid on account fortnightly, and he sends in a quarterly account.

FRIDAY, 21 NOVEMBER, 1856.

Present:—

Mr. EGAN,  
Mr. GORDON,  
Mr. JONES,  
Mr. LANG,

Mr. OXLEY,  
Mr. PLUNKETT,  
Mr. ROBERTSON,  
Mr. SCOTT.

RICHARD JONES, Esq., IN THE CHAIR.

John Rae, Esquire, called in and examined:—

- John Rae,  
Esq.  
21 Nov., 1856.
1. *By the Chairman:* At what date were you appointed one of the City Commissioners? I was appointed to act from the 1st of January, 1854; I think the appointment was made in December, 1853.
2. Were any terms or conditions understood or specified as to the duration of the office at the time you were appointed? Nothing but what appears in the Act.
3. What is the provision of the Act in reference to that point? I mean merely that I understood that the Act was to continue in force until the end of 1860.
4. Was it your impression that your appointment would continue until 1860? It was.
5. What office did you hold previous to your appointment as Commissioner? I was Town Clerk of the late Corporation for ten years, and upwards.
6. Will you be kind enough to inform the Committee what was the general nature of the Commissioners' duties at the time of your appointment? The duties, I might say, were divided into three parts—relating to the management of the City, the Sewerage, and the Water departments.
7. What arrangements were made, among the Commissioners themselves, for the performance of these duties? No specific arrangements were made for dividing the duties; we considered that we were all responsible for all the duties under each of the departments; and we never found it possible to make an exact distinction in our duties. Practically, I may state, that from my former connexion with the Corporation—I mean as Town Clerk—I considered that a great portion of my duties would be confined to the office work, and attending to the duty with which I had formerly been best acquainted; but of course I took my share of all the other duties as well.
8. The supervision of the financial affairs of the Commissioners was cast more especially on you? It fell, without any specific arrangement, principally on me. I have paid considerable attention to keeping the accounts of the Commissioners straight, getting the books in the different departments arranged upon a good principle, and introducing a system of double entry into the Treasurer's department.
9. Then, I presume, you are best qualified to give information as to the financial affairs of the City? I presume so. Indeed, I understood that the Committee wished information of this kind, and I have taken some trouble in getting up a financial statement, which will be useful to the Committee and also to the new Corporation, showing the annual receipts and expenses from the commencement of the old Corporation to the present time.
10. With regard to the general City improvements, what revenue have you derived for those purposes from the time of your appointment? We have received, for rates alone, at the rate of about £20,000 a-year. In the first half of the year 1854 we received a sixpenny rate on the old assessment, amounting to £5,827 6s. 6d.; in December of that year a rate of one shilling on the old assessment, for the second half of the year, amounting to £11,599 5s.; in all, £17,426 11s. 6d. In the first half of the year 1855 we received a rate of three pence in the pound on the new assessment, amounting to £9,637 19s. 3d.; and in December of the same year a rate of four pence on the same assessment, which yielded £13,206 6s.; making £22,844 5s. 3d. For the first half of this year we levied a rate of three pence upon the present assessment, which amounted to £9,894 4s. 6d. The total

total for the two years and a half is £50,165 1s. 3d., which is, as nearly as possible, an average of £20,000 per annum from rates. In addition to these sums we have received, as endowment—in 1854, £20,000, and in 1855 and 1856, £10,000 each; making a total of endowment from the Government of £40,000.

John Rae,  
Esq.  
21 Nov., 1856.

11. I would wish you to tell the Committee the various kinds of revenue, and the amount derived from each? The revenue, I may state, has increased continuously, and every year shows a tendency rather upwards than downwards. This is the present state of the gross revenue per annum, from the following sources:—

The Markets ... ..	£6,400
The Market Wharf ... ..	450
Fees and fines under the Building Act, the Slaughtering Act, and other matters, including Hackney Carriages...	2,950
Making (for the current year) a total of ... ..	£9,800

And then there is the water revenue.

12. Is that for the current year, or the account for the half-year? The present annual receipts. The water revenue we put down as £7,000; it is scarcely as much at present, but it will be so next year. Of course, it is increasing every year, as pipes are laid down.

13. *By Mr. Plunkett*: What was it last year? It was under £7,000; but we believe it will be fully £7,000 in 1857.

14. What is the gross amount of revenue received by the Commissioners from the time of their appointment, from miscellaneous sources, and from the water rate? I find the gross revenue from water rates, from the first January, 1854, to the 31st October, 1856,—that is two years and ten months, which is the period for which the other sums are given—was £18,154 5s. 6d.; and from miscellaneous sources £22,591 8s. 1d.

15. Will you add to those sums the amount of the Government endowment and that received from the ordinary rates? The endowment has been £40,000, and the receipt from rates £50,165 1s. 3d.; making a total revenue from all sources amounting to £130,910 14s. 10d.

16. Can you supply the Committee with an estimate of the probable income of the Commissioners for the current year, including rates? It would altogether depend upon what rate the Assembly will pass. I will assume that it will be on the same scale as hitherto, namely £20,000 per annum. Our revenue would then stand thus:—

	£
Ordinary Rates ... ..	20,000
Water Rates ... ..	7,000
Miscellaneous Revenue ... ..	9,800
Endowment ... ..	10,000
Total ... ..	£46,800

17. Of that revenue, more especially that from miscellaneous sources, what proportion is derived from works which have been handed over by the Government to the City, such as Markets and Wharves? The Markets and the Market Wharf alone produce £6,850. The other receipts, under the head of miscellaneous revenue, are derived from the Hackney Carriages Act, and other Acts.

18. I am anxious, rather, to get at the revenue which is derived from the public works that have been handed over to the City by the Government? That amounts to £6,850. In putting this estimate I should have added, that we are deriving no revenue from the Lime-street Wharf, but no doubt next year there will be a revenue from it.

19. What proportion of the water rates do you think could be added to the sums derived from the Markets and Wharves, and looked upon as endowment—You say the water rates produce about £7,000 a year; how much of that sum could be raised from the water works handed over by the Government? It is all raised from them, because the debt of the Corporation has been transferred, and all the interest, also, to the water works; that is to say, the late Corporation raised £7,600 by debentures to pay for water purposes, which have been taken over by the water fund; consequently the whole £7,000 would fall upon that fund.

20. Can you let the Committee know what revenue the old Corporation derived from the water works handed over to them by the Government? The water works carried out by the late Corporation, during their eleven years of existence, cost altogether £20,786 5s. 9., and they received a revenue, during the same time, from the water of £22,853 4s. 3d. In our first yearly Report the liabilities of the Corporation were stated, and the Report proceeds:—

“ 54. Although the City Fund, however, is debited as above with £7,600, due on debentures and mortgages, and has hitherto been charged with the interest on the same, this sum ought in justice to be transferred to the Water Fund.

“ The total receipts from water, during the eleven years

“ existence of the late Corporation, amounted to... 22,853 4 3

“ And the total expenditure, during the same period, to 20,786 5 9

“ Leaving a balance of only ... £ 2,066 18 6

“ to cover the necessary salaries and office expenses. The City Fund, therefore, has been no gainer from the water works. The revenue from this source has all been expended on laying pipes and increasing the supply of water.

“ 55. But the water revenue was insufficient for this purpose; and the City Council, very properly, borrowed £7,600, for the extension of works, from which a handsome and increasing revenue was derived. The interest paid on this debt, up to 31st December last, amounted to £1,438 3s. 4d.

“ 56.

John Roe,  
Esq.  
21 Nov., 1856.

" 56. As the whole revenue from the water works has accordingly been transferred to the water fund, it is obviously equitable that the debt and the interest paid thereon should be carried to the same fund, and the city fund relieved from a burden which was created for increasing a revenue which has now been wholly withdrawn from it."

Upon that principle we carried the debentures over to the water works, including the interest that had been paid upon them by the Corporation; and now this sum of £7,600, which was a debt upon the Corporation, is a debt upon the water works.

21. Then the £7,000 you may derive from the water works may be looked upon as a return of interest on the outlay incurred by the City and the Government previously? No. I do not know that I have made myself clear; my meaning is this, that the £7,000 will go, not into the City fund at all, but the water fund, because that fund has paid the whole of the expenditure incurred by the Corporation, and consequently it will be entitled to the revenue.

22. As I understand you, all the revenue now received is net revenue—all the outlay has been repaid, and the interest? Yes.

23. So that the £7,000 now derived from water rates is a clear income to the City, without absolutely costing the City anything? Yes, a clear income without costing it a farthing.

24. You have shown what the amount of your income has been during the last two years and ten months—can you now show us the amount of your expenditure during that time, including the expenditure on Water and Sewerage Works provided for by loan? The total expenditure for City purposes including salaries has been £143,677 18s.; and for all purposes £417,069 8s. 4d.

25. Of that sum can you distinguish the amounts that have been paid for Works? For those that we call general City Works £99,349 19s.

26. And for Salaries? For salaries and law charges (we include both together because the City Solicitor is sometimes paid by salary, sometimes by fees) £10,578 9s. 6d.

27. You have given the amounts for works and salaries—what is the amount left? There is the lighting not included yet, £6,805 0s. 8d.; and Markets, £4,959 9s. I have down here, salaries for the City, £10,578 9s. 6d. for two years and ten months; all other expenses, £133,099 8s. 6d. (*Vide Appendix D.*)

28. Can you favor the Committee with a statement showing the mode in which the gross expenditure has been incurred? Yes. In the first place I beg to hand in this statement, which was got up for our own use, but will be useful for our successors; it is an account of the receipts and expenditure of the Corporation for eleven years, from the 1st of January, 1843, to the 31st December, 1853. (*The witness handed in the same. Vide Appendix A.*) The next is the distribution account of the salaries. I ought to explain what this means. The salaries of the officers in all our departments were all originally paid out of the City fund; but we thought it very unfair that the City should be burdened with the salaries of officers as much required for the water and sewerage as for general City purposes; consequently, in our first year of office, we made a distribution which we have always maintained since; we consider, for instance, that the Commissioners themselves, the Secretary, the Treasurer, the Solicitor, and the office Keeper, are all just as much required for the one as the other, and the expense of their salaries is divided between the three departments; the expenses of the City Surveyor's department are paid entirely out of City funds, and those of the Engineer's department are divided between the sewerage and water. On this principle I have made up a tabular statement, which I beg to hand in, showing the salaries in existence in 1853, before we came into office, and the salaries paid for City, Sewerage, and Water purposes, from the time of our appointment to the 31st October last. (*The witness handed in the same. Vide Appendix B.*) The next statement is a tabular one, showing the receipts and expenditure of the Commissioners for City, Sewerage, and Water purposes, from the 1st January, 1854, to the 31st October, 1856; they are got out exactly in the same form as the first statement. (*The witness handed in the same. Vide Appendix C.*) The next statement I have prepared, which I think is a very useful one, shows the gross expenditure, separately, under each of the heads of City, Sewerage, and Water purposes, and the grand total of the whole together, during our whole term of office. (*The witness handed in the same. Vide Appendix D.*)

29. Have you any other statements you wish to hand in bearing upon the same subject? I think not.

30. Have you any means of furnishing the Committee with the comparative cost of working the Commissioners' Department, and the Corporation? Yes, during the existence of the Corporation, eleven years, the salaries amounted to...

... ..	£ 41,031	19	8
All other expenses to...	...	119,127	12 8
Total...	...	160,159	12 4

Under the Commissioners for two years and a half the salaries for the City amounted to	...	10,578	9 6
All other expenses to...	...	133,099	8 6
Total...	...	143,677	18 0

For Sewerage—Salaries	...	7,778	6 3
All other expenses	...	142,374	10 7
Total...	...	150,152	16 10

## SELECT COMMITTEE ON THE CITY COMMISSIONERS' DEPARTMENT.

25

For <i>Water</i> —Salaries ... ..	...£	9,409	4	1	
All other expenses ... ..	...	113,829	9	5	
	Total...	123,238	13	6	
Total Salaries...	...	27,765	19	10	
All other expenses ... ..	...	389,303	8	6	
	Grand Total...	417,069	8	4	

John Rae,  
Esq.  
21 Nov., 1856.

31. Supposing the Sewerage and Water Works to be suspended, do you believe that the amount you have now put down as the working expenses of the City Department would be sufficient to meet all the expenditure incurred? No, I do not, for we should require a certain number of City officers if there were no other than City works to do. That is the reason why the salaries seem longer under the Corporation compared with the expenditure.

32. The less comparative cost of the Commissioners' Department arises, in some degree, from their having large works to conduct in addition to their own? Yes.

33. Passing from general City improvements to matters concerning the sewers—how have the funds been raised which you are now expending in the construction of the sewers? Entirely by the Government.

34. Under an Act of the Legislature? Under the Sewerage Act of 1853.

35. On what security are these loans raised? On the security of the City revenues. They are raised by the Government upon the General Revenue, but are secured to the Government on the City Revenue.

36. How is the interest on these loans now paid? Out of the same source—out of the funds we receive from the Government. We have no return from the sewerage yet.

37. Substantially, the interest at present is paid from the capital? Yes.

38. What expenditure is incurred now in maintaining the present sewers—the sewers you found in existence, supposing you did find any in existence? It is difficult to give an answer to that question. The expenditure varies every year; we may put it down at £2,000 one year, and £1,500 the next. At a rough estimate say, from £1,000 to £1,500, per annum. In fact, we only became aware of the existence of some sewers from their falling in. We could not get any plans of the sewers in existence.

39. What expenses have you incurred up to this time in the formation of new sewers? The total expense up the 27th October last, has been £108,727 13s. 10d.

40. I understand that to be for contracts actually entered into? Mr. Randle's contract alone.

41. Independently of the official and incidental expenses connected with the department, this sum is for the actual works? Yes, in connexion with his contract, on which he has been paid £105,930 4s. 7d., leaving a balance, at present in hand, of £2,797 9s. 3d., in addition to the £1,000 which we hold as security, making together £3,797 9s. 3d.

42. Can you now inform the Committee what will be the cost of completing the section of the sewerage that has been entered on? I beg to hand in a return shewing all that has been expended upon the sewerage, and all that, according to Mr. Bell's estimate, will be required to complete this section. It makes the cost of the whole, when completed amount to £119,422 11s. (*The witness handed in the same. Vide Appendix E*).

43. Does that sum include the separate contract which we understand is to be made for the outlet of the main sewer at the point of discharge? No; this is solely the cost of Mr. Randle's contract. The work you speak of will cost £3,000.

44. I observe that the Engineer's estimate for completing this section of the sewerage which has been entered upon was £65,490 6s. 6d.? Yes.

45. And the actual cost will be £119,422 11s., showing a sum in excess of the estimate of £53,932 4s. 6d.? Yes.

46. Can you supply the Committee with any estimate of the probable cost of completing the whole of the City sewerage? I am not in a situation to do so. I have asked the Engineer several times about it, but he says that until he gets more information with reference to the plans, he would not like to hazard any opinion, probably because the former estimate was so much under the mark. He is generally over rather than under the mark in his estimates.

47. How is it proposed to ultimately pay the interest? By the sewerage rates.

48. Levied, I presume, only on those portions of the City where sewers have been constructed? Yes. We cannot by the Sewerage Act, nor the Corporation Bill now before the House, which is partly copied from it, raise any sewerage rate until a sewer is carried down any portion of a street, and the drainage is connected with it.

49. What is likely to be the rate levied for sewerage purposes? According to the Act the rate is fixed by a sort of sliding scale, a per centage on the property, beginning at about seven per cent. upon the smaller rentals, and decreasing to about three per cent. when you come to the higher rentals, about £300 or £350.

50. Has there been any estimate made of the probable produce of the rates to be levied for sewerage purposes? The only estimate we were required to make was one for 1857, when we estimated that the property included in this section would amount to about £212,460. We estimated the amount of the rentals, and took an average of four per cent., and then, anticipating that the rates could hardly be collected in the commencement of 1857, we took the half of that, and I think it came to £4,000 for the half year. I speak from memory.

51. So that, supposing your estimate to be correct, you have to draw from this section the sum of £8,000 or £9,000 a year? Yes.

52. Which would be the annual return for the expenditure incurred? And a very fair per centage.

53. A sum much larger than will be sufficient to defray the interest on the loan? Yes. I made an estimate, the other evening, of this kind:—The present assessment of City property

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is £780,000, and upwards; supposing it to be reduced to about £500,000 by the next assessment, which we probably shall have soon, four per cent. upon that for sewerage, and the same for water, I calculate would, when the water and sewerage works are completed, be abundant to pay the whole of the interest and leave a sum over.

54. That is on the assumption that the whole sum laid out on the sewers does not exceed £400,000? Yes, in round numbers.

55. And there is a provision in the Act restricting the loans to that amount? Yes. I made the calculation on the assumption that the whole sum authorized to be borrowed could be borrowed at 5 per cent.

56. With reference to the water works, I presume the funds have been raised in much the same way? Exactly the same way, with the exception of sums derived from revenue.

57. And on the same security? Yes.

58. How is the interest on this water works loan paid? It comes out of the general fund, so that it may be said to come out of the revenue from water rates, because it comes from the same funds.

59. You have already explained to the Committee, that the present revenue from that source is about £7,000 a year? Yes.

60. How is that rate expended? On the general water works in the City, laying down pipes, and keeping up the temporary supply at the Lachlan Swamp.

61. It is substantially expended in the supply of water to Sydney? Yes, and in keeping up that supply at the Swamp.

62. And defraying the official and working expenses of that department? Yes.

63. Have you made any estimate of the probable increase of revenue from the new works when completed? This sum of £7,000 was put down as the probable revenue for next year.

64. Including all the new works which will be completed up to that time? Yes, until the great supply comes in from Botany.

65. What revenue do you estimate will be received when the works are completed? I conceive that when the water supply is complete it should be paid for by a rate, not as at present so much per room; and I calculate that a rate of 4 per cent. will yield £20,000.

66. Your total outlay upon these water works is how much—how much have you borrowed? £106,587. By the existing Act the Government is authorized to borrow £200,000 for this purpose; and by the Bill now before the House, the Council may borrow £150,000 in addition to the sums already borrowed.

67. By the Bill is the amount of that loan extended? Not as far as the Government is concerned; but it is proposed by the Bill to allow the City authorities to raise £100,000 for City purposes, and in addition to the sum we have got from the Government at the present moment, £200,000 for the sewerage, which I believe will complete it; for water it is proposed, in addition to the amount raised already, to allow them to borrow another £150,000.

68. Which will be, for water purposes, a total loan of £256,587? Yes.

69. Could you form any estimate of the probable cost of the land required for water purposes for the new works? According to a report from Mr. Bell, which has not been printed, he gives the following estimate of the expense of completing the whole water supply of Sydney, in addition to the sums already advanced. Unless the Committee desire it, I think it will not be advisable at present to give the separate items of this estimate, as one is for the land resumed in Crown-street for the low service reservoir, the value of which will have to be fixed by arbitration, or in the Supreme Court. The total estimate for water purposes, according to Mr. Bell's report, would be £159,350.

70. That is for works to be completed from this time? Yes; besides what has actually been done. Our contract with Mr. Russell for thirty-inch mains, which have been delivered, amounts to £40,000; the engines, which are expected to arrive very soon, including putting up, £18,000; the land at Botany which has been paid for, £25,843 5s. 8d.; the high level reservoir near Gordon's Mill £6,000; pipes to ditto, £9,000; making a total of £258,193, which represents the total cost of supplying Sydney with water, including the reservoir and every thing; and Mr. Bell fully believes it will be done within that sum rather than over it. Mr. Rider's estimate was £175,000.

71. Can you inform the Committee what outlay was incurred for land and works prior to Mr. Rider's dismissal—what sum was expended for water purposes, from the time he was appointed till his dismissal? I may say from memory, that all we have done in water works up to the present time, is simply to resume the land at Botany, to enclose the land there with a fence, and to order from England the thirty-inch mains, to bring the water from Botany, the engines, and, very recently, a quantity of fire bricks for lining the reservoirs. You will find in Mr. Bell's report of the 28th March, 1856, appended to our second Yearly Report, exactly what was done in the water works when he came into office.

72. Then, as I understand you, there was very little expense incurred in Mr. Rider's time in carrying out the actual works? No, there have been scarcely any actual works carried out; we have only ordered the *matériel* for the work, and I may say it is now all on the way for the complete carrying out of the whole.

73. Can you supply the Committee with the difference in the estimated cost of carrying out the water works, as contemplated by Mr. Rider, and by Mr. Bell? Mr. Rider's estimate was £175,000 for the completion of the whole; that was in his very first report made to us. Mr. Bell's estimate is £258,193.

74. Will Mr. Bell's works be as complete to secure an ample supply of water as Mr. Rider's? I believe fully, if not more so. I believe they will be perfectly complete. I think Mr. Rider's were not so complete as Mr. Bell's.

75. By Mr. Plunkett: Are the works the same? No, they are not the same.

76. What is the difference between them? The difference generally was this: Mr. Rider, in his original plan, contemplated two reservoirs out at Botany, two filters, (very expensive works) and a pure water basin for receiving the water after coming through the filters, a reservoir

reservoir at Grose Farm, and one in Sydney. Mr. Bell made several alterations in the plan of Mr. Rider, the principal of which were as follows:—To reduce the height of the embankment at Botany considerably; to alter the form of the stand pipe. I may state that the stand pipe as proposed by Mr. Rider, was to consist of three rising mains and one descending main; that is to say, the water was to be forced up the three rising mains and down the descending main to supply Sydney. This would have involved the expense of sending water the full height of the stand pipes, whatever height you required it in Sydney. The alteration made by Mr. Bell is a very ingenious one,—he uses merely one stand pipe open at the top. The water is forced from the engines into the bottom of his pipe, and ascends by the pressure from the engine up this pipe, and just to the extent that it goes up this pipe it is getting that height up the pipes all the way to Sydney, therefore you have not to put on any force to raise it higher than you want. Another improvement was to have a low and high service reservoir, for the purpose of saving the expense of raising the water higher than necessary; another was to change the line of the thirty-inch main, instead of carrying it, as Mr. Rider intended, along the Botany Road; he has found a straighter line to bring it to the lower reservoir; he also changed the site of the engine-house to the hill on the opposite side, which, he thinks, will be more convenient for erecting the works, and also for getting the coal by water for the engines.

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77. Have you reason to believe that if Mr. Rider's plans had been carried out, the expense would have been considerably in excess of the amount required for carrying out Mr. Bell's? Yes; I should imagine, from looking at the two, that Mr. Rider's would have cost more.

78. You have reason to believe that Mr. Rider's estimate was very much under what the actual cost would have been? That is my impression, judging from what Mr. Bell has said in his report.

79. Inasmuch as Mr. Bell reduced some of the expensive works, and still shows a much larger probable cost? Yes.

80. Mr. Bell says he laid aside the plan of the stand pipe, "as wrong in principle and expensive in practice," and that he was "having other plans prepared, which will be less costly to make and render the working expenses of the engines materially cheaper?" No doubt his plan will render the working expenses cheaper.

81. You think Mr. Bell's plan will involve altogether less expense in the working than Mr. Rider's. Yes.

82. And that the actual cost will be less? Yes.

83. *By Mr. Oxley:* That is assuming Mr. Rider's estimate to be false? I do not like to say false. My impression is that the cost of Mr. Rider's scheme must have been very much under estimated.

84. *By the Chairman:* Passing from these financial matters to the execution of the sewerage works by Mr. Randle, I wish to ask you if the Commissioners were aware of the provisions of the contract for the construction of the sewers? Yes.

85. The contract is signed by Mr. Rider, and dated 2nd March, 1855? Yes.

86. I mean more especially in reference to the contractor supplying weekly accounts of the work put in hand, and daily vouchers of the day and jobbing work executed on the preceding day? Yes.

87. I will read to you a clause from that contract. I find it here stated that "The Contractor shall make out and deliver to the said Commissioners, at their Office, in King-street, on the Wednesday of every week, an account of every work that is put in hand, whether the same is completed or not, and on every succeeding day, correct duplicate daily vouchers or accounts, in writing, of each day and jobbing work executed on the preceding day, specifying in detail, the quantities and measurements thereof, upon a printed form to be furnished by the said Commissioners." Did the Contractor in accordance with this condition of the contract, supply the Commissioners with these weekly accounts and daily vouchers? No; we did not call for them. We understood at the time that these, if of any utility, were intended for the Engineer, but not for the Commissioners. We understood we were called upon to pay all our accounts upon the certificate of the Engineer, but our late Engineer and the present one look upon these returns as of not the slightest practical utility; they could make no use of them. I may state that, although we did not consider it necessary to call for them at first, as soon as we found the late Committee required them we took their advice, and did call for them, and got them, but even now, the Engineer makes no use of them.

88. Do I understand you to say that now the contractor supplies the weekly accounts and daily vouchers, in accordance with these conditions of the contract? He does. In December last, we wrote for them, and, after some little difficulty, caused by the contractor insisting that they had never been called for, and were troublesome and useless, we got them.

89. Since then you have had them furnished in accordance with this condition? Yes.

90. Weekly and daily vouchers? Weekly and daily vouchers, as far as I understand.

91. Then, prior to December, these weekly and daily vouchers were not supplied? We did not call for them; we did not think them of any use.

92. Then I presume you never enforced the penalty mentioned in the latter part of this clause of the contract for non-observance of this condition? No, we did not enforce it, because we did not require them; and if we did not require them we could not enforce the penalty.

93. I will read what relates to this penalty:—"and, in default of such delivery, the contractor shall deliver and pay to the Commissioners the sum of five pounds for each and every day that he refuses or neglects to deliver such vouchers as aforesaid; and it shall be lawful for the Commissioners to deduct any sum or sums to become due by reason of any such forfeiture, from any sum or sums due or to become due to the contractor under this or any other contract with the said Commissioners, or to recover the same by any other means?" All that I mean to say is, that he is to furnish them on a form to be furnished

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- by us; now if we did not supply the forms, nor think it necessary to do so, he might fancy he was not bound to furnish the returns; he might say he was only bound to do so upon forms supplied by the Engineer.
94. Then, as I understand you, you never supplied him with forms? No, not at first.
95. And never called upon him to furnish these accounts? Not till December.
96. As a consequence of that you did not feel justified in enforcing the penalty required by this condition? No, I think we were not, unless we supplied him with the forms.
97. Did the Commissioners receive from Mr. Randle the quarterly returns provided for in the next condition, which runs as follows:—"Within seven days from the expiration of the 31st day of March, the 30th day of June, the 30th day of September, and the 31st day of December, in each year, the contractor shall make out and deliver to the Commissioners, at their office, bills, in such form and manner as shall be directed, of the several works done by him during each preceding three months, and the amounts shall be paid, subject to all deductions by the City Commissioners on account of any of the claims or penalties hereinbefore specified—" were these quarterly bills supplied by the contractor? Yes, we received these; they were furnished by the contractor.
98. *By Mr. Scott:* Are you sure of that? I am satisfied in my own mind that they were; the first quarterly measuring that we had was in September, 1855; and there was a statement furnished by Mr. Randle to that time. A considerable time however, elapsed, during which our officers were before the late Committee a good deal; the calculations were delayed from time to time; and ultimately it was resolved to include that measurement with the December quarterly measurement. There was a statement made by Mr. Randle to September, but no payment was made upon that; the first regular quarterly payment was the December one. Whether that September one was completed the same as the December one I am not sure, but I know the December measurement was the one we looked upon as completing the whole measurement up to that time.
99. These conditions in the contract seem to imply that the contractor should furnish to you, periodical, that is to say daily, weekly, and quarterly bills or accounts of the works in progress, altogether independent of any certificate your Engineer might give—he was required to supply you with an account from week to week of the work executed? We did not consider it in that light. We considered that these returns were for the use of the Engineer to compare with the returns he was bound to supply to us; for it was upon the Engineer's certificate we acted.
100. Does it not occur to you, that if you had received from the contractor these weekly accounts of the work he considered himself to have performed, they would have been a check upon the accuracy of the Engineer's certificates, upon which you have paid; if you had received a bill from the contractor, and you received the Engineer's certificate upon that bill, you would have been much better able to judge of the correctness of the charges made by the contractor than by trusting entirely to the Engineer's measurements? It might have been so, but it was not our impression at the time. And I believe it is not customary in the Ordnance at home, although a similar clause is introduced into their contracts, for the contractor to supply these weekly bills regularly.
101. Do you not think by doing this you relieve the contractor from an obligation, under which he is fairly placed by his contract, to supply from time to time his version of the work done? That would come in the quarterly account.
102. This the contract requires him to furnish you weekly? Yes.
103. This is made the foundation of the fortnightly payments which you pay on the Engineer's certificate. I will read the next condition of the contract: "On the Friday afternoon of every alternate week payments to the extent of      per cent. will be made to the contractor by the City Commissioners on account of any work performed by him from the date of the last payment, upon a certificate from the City Engineer that such works have been carried on and constructed in accordance with the foregoing conditions of this contract, and the several amounts of these payments shall be deducted from the quarterly accounts hereinbefore provided for,"—so that under the contract it was evidently contemplated that every week the contractor should furnish to you a statement of the work he had done; that every alternate week, two days after this statement was supplied by the contractor, your Engineer should furnish you with a certificate of the work actually done according to his measurement; and that the one was evidently intended as a check upon the other—does not that appear to you the construction of the contract? Of course it can be construed in that way; I can only say that we took a different view of the subject at the time.
105. Do you not think that would have supplied you with a practical means of testing the trustworthiness and competency of your Engineer, and also the accuracy and faithfulness of the contractor in performing his work? I do not exactly see how it could have answered that purpose. Suppose these returns had been less in amount than the Engineer's, or suppose they had been more, still it was for the Engineer to report to us the exact sum, and it was upon that report of the Engineer entirely that we had to pay; it was not upon these returns, which we anticipated were for the use of the Engineer himself.
106. The contract specifies that these weekly returns shall be made to you, not to your Engineer, or through your Engineer—supposing these had been made to you from week to week, and you received from your Engineer his fortnightly certificate of what had been done, you could then have had an opportunity of comparing the contractor's account with the Engineer's measurement, and supposing you found that the contractor claimed for a larger amount than the Engineer's certificate, it would have put you in train to ascertain whether there was any thing wrong going on, either on the part of the Engineer or the contractor? It might have answered that purpose.
107. Looking carefully to these conditions, do you not think you ought, with a view of protecting the public interest, and for your own safety, to have enforced a strict compliance with



with them? I can only repeat what I have said before, that at the time we took a different view of the matter, but I think there is little doubt, it would have been better if we had carried out these conditions of the contract; I will not dispute that it might have been more satisfactory if we had done so under the circumstances.

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108. It would have been a more effectual check upon the possibility of over-payment? I cannot see how it would have been that. Supposing these statements had been made, and were under our immediate charge, still it was left to our Engineer to fix the proper charge, and it was entirely by his certificate we paid.

109. Supposing there had been any marked discrepancy between the account of the contractor and the Engineer, it would have called your attention, and led to immediate enquiry? It might have had that effect.

110. And might have put into your hands as unprofessional men, the means of checking anything that might have been wrong? I have always found a difficulty in checking these matters; they are so much of a professional character. The fact is, we looked upon our Engineer, as we do now, as our confidential professional adviser, and trusted a good deal of the minutiae of these matters, which were strictly professional, to be carried out by himself.

111. You are disposed to believe, that it would have been better if from the commencement you had enforced an observation of this condition? Yes, I think so, from the view you take of it. There could certainly have been no harm in it. I believe our present Engineer will bear out my statement, that they are not looked upon as at all valuable documents, and that when he receives them now, he pays no attention to them, but simply files them.

112. He has no right to receive them? Then we have not carried out your idea yet.

113. The condition of the contract is quite specific—it says, “shall make out and deliver to the said Commissioners”? You are aware that in all contracts of the kind, the Commissioners are often mentioned when the officers of the Commissioners are meant.

114. It seems to me that this condition of the contract is specially designed to give you the means, as unprofessional men, to test the correctness and accuracy of the Engineer, and the correctness and honesty of the contractor, and that by getting these two documents, receiving at one time the account of the contractor, and at another time the certificate of your Engineer, you are able to judge whether the contractor is acting correctly and honestly by you, and whether your Engineer is performing his duty correctly also? I may state that they are handed to the Engineer yet; though we see them, he sees them also.

115. You would have had this practical means of testing it—the contractor would have stated that he had executed so much work of a certain kind, on which his charge was so and so, and your Engineer would have stated that since the last measurement a certain amount of work was executed, and that there was payable on that work a certain sum—if you had had these two distinct and independent statements to compare with each other, you would have been in a position to see how the work was actually going on, and whether the statement of the contractor tallied with that of the Engineer? Yes, if such statements had been furnished.

116. Supposing these statements had been furnished to you, you would have been undeniably in a better position to judge whether things were going on correctly, and to guard against over-payments? I have stated it might have been better to have done so, though it did not occur to us; but you will bear in mind, that the fortnightly measurements would not tally with the weekly bills, because the weekly bills were not statements of the work actually done, and did not necessarily specify quantities.

117. In point of fact, each two weeks accounts from the contractor should have tallied substantially with the fortnightly certificate supplied by the Engineer, and you would thus have had two separate sets of accounts, which ought to have substantially tallied? Yes.

118. And these should have been required to tally substantially with the quarterly bills sent in by the contractor, and the quarterly measurements made by the Engineer? Yes.

119. So that by the contract there is an effectual system of checks for carrying on the work and making payments on account of it? In reading it that way it appears so.

120. When Mr. Elliott was before the Committee he said he was not quite sure whether you had copies by you of Mr. Rider's testimonials, are you aware whether there are? I do not know; I do not think we generally keep the testimonials of the officers.

121. Will you look through the office, and, if you find them, supply the Committee with copies? I will. But my impression is that they were not kept.

122. And any papers connected with Mr. Mais also? Yes.

## APPENDIX A.

ABSTRACT of the Receipts and Expenditure of the Corporation of the City of Sydney during the Eleven Years of its existence, from 1st January, 1843, to the 31st December, 1853, compiled from the Yearly Statements furnished to Government for the Blue Book.

RECEIPTS.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	TOTAL.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
City Rate .....	5,008 14 2	3,737 9 10	2,621 14 8	2,086 2 7	5,461 19 1	6,037 3 6	5,736 0 9	5,102 8 7	9,876 8 1	6,951 16 0	7,540 0 9	60,159 18 0
Lighting Rate .....					804 4 11	216 19 7	661 1 10	251 0 2	2,587 0 2	984 2 5	1,750 11 0	7,255 0 1
Markets and Market Wharf .....	2,148 4 9	1,845 0 6	2,344 14 10	2,225 5 10	2,488 6 8	2,600 11 8	3,290 3 4	2,567 13 4	2,499 9 6	2,331 16 0	2,425 2 1	26,766 8 6
Water .....	1,196 3 8	915 1 2	1,105 3 10	1,199 14 9	1,331 16 4	1,863 3 6	2,234 1 3	2,021 3 5	2,810 8 11	3,780 18 0	4,395 9 5	22,853 4 3
Fees and Fines .....	703 10 6	1,062 15 6	874 11 6	1,092 17 6	1,323 2 6	1,873 6 3	1,882 0 3	1,368 2 9	1,494 19 5	1,245 14 6	1,606 7 9	14,527 8 5
Government .....	2,900 0 0	2,900 0 0	129 5 4									5,929 5 4
Debentures .....				1,100 0 0				2,000 0 0			4,500 0 0	7,600 0 0
Fire Engines .....											170 0 0	170 0 0
Removing Dead Animals .....											30 1 6	30 1 6
Miscellaneous .....	9 16 2	8 2 4		11 0 0				156 14 9		15 3 2	24 14 1	225 10 6
Police Rates and Fees .....	5,008 14 2	5,198 7 4	3,115 19 2	14 19 0								13,337 19 8
<b>Total Receipts.....</b>	<b>16,975 3 5</b>	<b>15,666 16 8</b>	<b>10,191 9 4</b>	<b>7,729 19 8</b>	<b>11,409 9 6</b>	<b>12,591 4 6</b>	<b>13,803 7 5</b>	<b>13,467 3 0</b>	<b>19,268 6 1</b>	<b>15,309 10 1</b>	<b>22,442 6 7</b>	<b>158,854 16 3</b>
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
General Works .....	3,355 9 0	6,032 12 11	4,896 1 11	5,302 5 10	5,942 1 1	7,484 6 7	4,057 12 8	7,852 6 6	4,728 4 2	7,214 3 11	12,711 12 3	60,576 16 10
Lighting .....	128 4 6	102 0 10	71 15 0	39 7 6	694 15 9	442 6 3	737 3 9		1,182 3 9	832 12 10	1,574 3 5	5,804 13 7
Water Works .....	186 5 6	241 7 2	20 2 2	413 10 0	1,411 9 3	2,291 5 8	1,373 3 0	2,569 15 1	2,676 10 3	3,372 4 6	6,230 13 2	20,786 5 9
Markets .....	213 19 7			71 2 9	71 4 4	85 6 9	73 15 5	92 19 0	89 9 3	105 13 0	133 8 1	936 18 2
Fire Engines .....		238 0 6	26 6 11		34 6 10	12 5 0						310 19 3
Watering Streets .....									80 12 6			80 12 6
Removing Dead Animals .....										27 1 6	76 7 6	103 9 0
Salaries and Law Expenses .....	3,786 0 5	4,741 5 1	3,963 6 6	2,784 9 9	3,034 11 9	3,278 2 3	3,187 2 3	3,377 19 3	3,420 18 6	3,852 17 6	5,605 6 5	41,031 19 8
Office Expenses .....	1,565 2 5	298 10 2	221 11 9	347 10 0	348 15 9	457 5 7	648 3 3	542 19 10	726 9 3	474 14 5	771 12 4	6,402 14 9
Assessment of Property .....	141 11 2		172 4 0				49 19 9		215 0 0			578 14 11
Interest on Debentures .....				4 0 0	64 13 0	66 0 0	66 0 0	88 10 4	186 0 0	186 0 0	321 0 0	982 3 4
Miscellaneous .....	260 14 8	6 2 6	19 15 9	60 12 6	28 10 0	217 11 8	257 19 4	227 7 0	107 16 11	279 8 0	249 12 4	1,805 10 8
Police .....	4,399 15 8	7,268 12 11	90 5 4									11,758 13 11
<b>Total Expenditure..</b>	<b>14,037 2 11</b>	<b>18,928 12 1</b>	<b>9,481 9 4</b>	<b>9,022 18 4</b>	<b>11,630 7 9</b>	<b>14,334 9 9</b>	<b>10,450 19 5</b>	<b>14,751 17 0</b>	<b>13,503 4 7</b>	<b>16,344 15 8</b>	<b>27,673 15 6</b>	<b>160,159 12 4</b>
<b>BALANCES.....Dr.</b>	<b>.....</b>	<b>3,261 15 5</b>	<b>.....</b>	<b>1,292 18 8</b>	<b>220 18 3</b>	<b>1,743 5 3</b>	<b>.....</b>	<b>1,284 14 0</b>	<b>.....</b>	<b>1,035 5 7</b>	<b>5,231 8 11</b>	<b>14,070 6 1</b>
<b>.....Cr.</b>	<b>2,938 0 6</b>	<b>.....</b>	<b>710 0 0</b>	<b>.....</b>	<b>.....</b>	<b>.....</b>	<b>3,352 8 0</b>	<b>.....</b>	<b>5,765 1 6</b>	<b>.....</b>	<b>.....</b>	<b>12,765 10 0</b>
Balance due by the Corporation 31st December, 1853 .. .. ..												£1,304 16 1
Debentures borrowed for Water purposes .. .. ..												7,600 0 0
<b>TOTAL .. .. ..</b>												<b>£8,904 16 1</b>

APPENDIX B.

SALARIES OF OFFICERS.	CITY CORPORATION.	COMMISSIONERS. 1854.				COMMISSIONERS. 1855.				COMMISSIONERS. 1856. (10 months.)				
		1853.	City.	Sewerage.	Water.	Total.	City.	Sewerage.	Water.	Total.	City.	Sewerage.	Water.	Total.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Town Clerk (Secretary).....	525 0 0	133 6 8	133 6 8	133 6 8	400 0 0	140 0 0	140 0 0	140 0 0	420 0 0	122 4 6	122 4 5	122 4 5	366 13 4	
Clerk .....	250 0 0	46 7 5	46 7 5	46 7 5	139 2 3	62 5 7	62 5 6	62 5 6	186 18 7	55 11 2	55 11 1	55 11 1	166 13 4	
City Treasurer .....	475 0 0	158 6 8	158 6 8	158 6 8	475 0 0	158 6 8	158 6 8	158 6 8	475 0 0	131 18 11	131 18 11	131 18 10	395 16 8	
Clerk .....	200 0 0	83 6 8	83 6 8	83 6 8	250 0 0	83 6 8	83 6 8	83 6 8	250 0 0	83 6 8	83 6 8	83 6 8	250 0 0	
Clerk .....	200 0 0	83 6 8	83 6 8	83 6 8	250 0 0	83 6 8	83 6 8	83 6 8	250 0 0	83 6 8	83 6 8	83 6 8	250 0 0	
City Surveyor .....	550 0 0	515 5 6	.....	.....	515 5 6	400 0 0	.....	.....	400 0 0	333 6 8	.....	.....	333 6 8	
Assistant .....	250 0 0	167 1 8	22 7 3	22 7 2	211 16 1	.....	.....	.....	.....	.....	.....	.....	.....	
Clerk .....	225 0 0	83 17 5	.....	.....	83 17 5	171 8 6	.....	.....	171 8 6	168 16 4	.....	.....	168 16 4	
Clerk of Works .....	180 0 0	220 0 0	.....	.....	220 0 0	230 0 0	.....	.....	230 0 0	191 13 4	.....	.....	191 13 4	
Surveyor of Buildings .....	250 0 0	300 0 0	.....	.....	300 0 0	300 0 0	.....	.....	300 0 0	250 0 0	.....	.....	250 0 0	
Inspector of Nuisances .....	250 0 0	250 0 0	.....	.....	250 0 0	392 4 5	.....	.....	392 4 5	322 1 8	.....	.....	322 1 8	
Inspector of Slaughter Houses .....	250 0 0	250 0 0	.....	.....	250 0 0	350 0 0	.....	.....	350 0 0	291 13 4	.....	.....	291 13 4	
Clerk of Markets .....	180 0 0	200 0 0	.....	.....	200 0 0	220 0 0	.....	.....	220 0 0	183 6 8	.....	.....	183 6 8	
Office Keeper .....	130 0 0	45 12 3	45 12 3	45 12 2	136 16 8	4 6 8	4 6 8	4 6 8	13 0 0	7 4 6	7 4 5	7 4 5	21 13 4	
Messenger .....	170 0 0	37 10 11	37 10 11	37 10 11	112 12 9	50 0 0	50 0 0	50 0 0	150 0 0	41 13 4	41 13 4	41 13 4	125 0 0	
City Solicitor or Law .....	630 6 5	133 6 8	133 6 8	133 6 8	400 0 0	133 6 8	133 6 8	133 6 8	400 0 0	66 13 4	66 13 4	66 13 4	200 0 0	
Superintendent, Pennant Hills .....	.....	192 14 10	.....	.....	192 14 10	.....	.....	.....	.....	.....	.....	.....	.....	
Engineer .....	.....	.....	378 9 10	378 9 10	756 19 8	.....	400 0 0	400 0 0	800 0 0	.....	336 4 1	336 4 1	672 6 2	
Assistant .....	.....	.....	93 6 8	93 6 8	186 13 4	.....	170 0 6	170 0 6	340 1 0	.....	168 6 8	168 6 8	336 13 4	
Assistant .....	.....	.....	110 2 4	110 2 5	220 4 9	.....	156 5 0	156 5 0	312 10 0	.....	166 13 4	166 13 4	333 6 8	
Assistant .....	.....	.....	34 13 6	34 13 6	69 7 0	.....	.....	122 0 10	122 0 10	.....	166 13 4	166 13 4	166 13 4	
Clerk .....	.....	.....	17 7 2	17 7 2	34 14 4	.....	86 2 2	86 2 2	172 4 4	.....	145 16 8	.....	145 16 8	
Inspector of Water Works .....	.....	.....	.....	300 0 0	300 0 0	.....	62 10 0	262 10 0	325 0 0	.....	.....	145 16 8	145 16 8	
Superintendent of Water Works .....	180 0 0	.....	.....	203 6 8	203 6 8	.....	.....	201 13 4	201 13 4	.....	.....	183 6 8	183 6 8	
Watchman, Lachlan Swamp .....	110 0 0	.....	.....	110 0 0	110 0 0	.....	.....	.....	.....	.....	.....	.....	.....	
Inspector of Nuisances .....	.....	.....	143 2 11	.....	143 2 11	.....	250 0 0	.....	250 0 0	.....	208 6 8	.....	208 6 8	
Draughtsman .....	.....	.....	.....	.....	.....	.....	41 13 4	41 13 4	83 6 8	.....	75 0 0	75 0 0	150 0 0	
Draughtsman .....	.....	.....	.....	.....	.....	.....	12 10 0	12 10 0	25 0 0	.....	83 6 8	83 6 8	166 13 4	
Clerk of Works .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	133 6 8	.....	133 6 8	
Mayor and Commissioners .....	5,005 6 5	2,900 3 4	1,520 13 7	1,990 17 3	6,411 14 2	2,778 11 10	1,893 19 10	2,167 14 0	6,840 5 8	2,332 17 1	1,908 19 7	1,917 6 2	6,159 2 10	
.....	600 0 0	866 13 4	866 13 4	866 13 4	2,600 0 0	866 13 4	866 13 4	866 13 4	2,600 0 0	700 0 0	700 0 0	700 0 0	2,100 0 0	
.....	5,605 6 5	3,766 16 8	2,387 6 11	2,857 10 7	9,011 14 2	3,645 5 2	2,760 13 2	3,034 7 4	9,440 5 8	3,032 17 1	2,608 19 7	2,617 6 2	8,259 2 10	

APPENDIX C.

APPENDIX TO THE FOREGOING EVIDENCE.

APPENDIX C.

	1854.				1855.			
	City.	Sewerage.	Water.	TOTAL.	City.	Sewerage.	Water.	TOTAL.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<b>RECEIPTS.</b>								
Rates .....	9,650 3 5	.....	4,038 8 10	13,688 12 3	18,274 14 8	.....	6,284 8 9	24,559 3 5
Markets and Market Wharf.....	3,121 6 6	.....	.....	3,121 6 6	6,350 14 6	.....	.....	6,350 14 6
Fees and Fines .....	1,837 5 9	.....	.....	1,837 5 9	2,857 4 3	.....	.....	2,857 4 3
Government .....	20,000 0 0	10,000 0 0	10,000 0 0	40,000 0 0	10,000 0 0	95,750 0 0	27,380 0 0	133,130 0 0
Removing Dead Animals.....	.....	.....	.....	.....	133 5 6	.....	.....	133 5 6
Cleansing Closets and rubbish .....	1,230 18 0	.....	.....	1,230 18 0	3,293 18 11	.....	.....	3,293 18 11
Forming private streets, &c. ....	.....	.....	.....	.....	1,002 7 9	.....	.....	1,002 7 9
Interest on Water Debentures.....	1,438 3 4	.....	.....	1,438 3 4	456 0 0	.....	.....	456 0 0
Debentures .....	.....	.....	.....	.....	8,900 0 0	.....	.....	8,900 0 0
Miscellaneous .....	78 0 4	32 10 0	32 10 0	143 0 4	220 5 1	1,881 15 5	100 16 5	2,202 16 11
Actual Receipts .....	37,355 17 4	10,032 10 0	14,070 18 10	61,459 6 2	51,488 10 8	97,631 15 5	33,765 5 2	182,885 11 3
Sums outstanding in 1854 and 1855.....	11,977 7 6	.....	.....	11,977 7 6	13,186 4 1	.....	.....	13,186 4 1
Balances, 1854 .....	5,514 7 1	.....	.....	5,514 7 1	.....	950 15 11	1,118 6 7	2,069 2 6
	54,847 11 11	10,032 10 0	14,070 18 10	78,951 0 9	64,674 14 9	98,582 11 4	34,883 11 9	198,140 17 10
Balances, Dr. ....	.....	.....	.....	.....	10,380 0 1	1,572 5 3	.....	11,952 5 4
<b>EXPENDITURE.</b>								
General Works .....	34,312 9 4	5,872 11 5	7,835 2 6	48,020 3 3	40,255 4 8	92,787 13 0	13,781 16 1	146,824 13 9
Lighting .....	1,623 17 0	.....	.....	1,623 17 0	2,552 18 9	.....	.....	2,552 18 9
Markets .....	1,224 0 6	.....	.....	1,224 0 6	2,192 9 10	.....	.....	2,192 9 10
Watering streets.....	485 18 8	.....	.....	485 18 8	179 1 0	.....	.....	179 1 0
Removing Dead Animals.....	53 8 0	.....	.....	53 8 0	30 10 0	.....	.....	30 10 0
Salaries and Law Expenses .....	3,766 16 8	2,387 6 11	2,857 10 7	9,011 14 2	3,696 10 8	2,760 13 2	3,934 7 4	10,391 11 2
Office Expenses and Furniture, &c. ....	821 15 10	821 15 9	821 15 10	2,465 7 5	717 18 10	426 10 5	426 10 5	1,570 19 8
Assessment of City Property .....	435 8 0	.....	.....	435 8 0	.....	.....	.....	.....
Interest on Water Debentures, &c.....	1,431 17 6	.....	1,438 3 4	2,870 0 10	786 8 9	.....	.....	786 8 9
Privies and Rubbish .....	1,521 6 1	.....	.....	1,521 6 1	3,421 18 3	.....	.....	3,421 18 3
Lime-street Wharf.....	.....	.....	.....	.....	3,465 0 0	.....	.....	3,465 0 0
Sinking Fund .....	.....	.....	.....	.....	100 0 0	.....	.....	100 0 0
Miscellaneous .....	265 18 3	.....	.....	265 18 3	164 19 6	.....	.....	164 19 6
Actual Expenditure .....	45,942 15 10	9,051 14 1	12,952 12 3	67,977 2 2	57,563 0 3	95,974 16 7	18,142 13 10	171,680 10 8
Balance, 31st December, 1853 .....	1,304 16 1	.....	.....	1,304 16 1	.....	.....	.....	.....
Debentures outstanding 31st December, 1853 .....	7,600 0 0	.....	.....	7,600 0 0	.....	.....	.....	.....
Sums outstanding 31st December, 1854 .....	.....	.....	.....	.....	11,977 7 6	.....	.....	11,977 7 6
Balance, 31st December, 1854 .....	.....	.....	.....	.....	5,514 7 1	.....	.....	5,514 7 1
Debentures on hand 31st December, 1855 .....	.....	.....	.....	.....	.....	4,180 0 0	.....	4,180 0 0
	54,847 11 11	9,081 14 1	12,952 12 3	76,881 18 3	75,054 14 10	100,154 16 7	18,142 13 10	193,352 5 3
Balances, Cr. ....	.....	950 15 11	1,118 6 7	2,069 2 6	.....	.....	16,740 17 11	4,788 12 7

## APPENDIX C.—Continued.

	1856.—Ten Months.											
	City.			Sewerage.			Water.			Total 1856. Ten months to 31st October.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
<b>RECEIPTS.</b>												
Rates .....	24,004	2	3	.....	.....	.....	7,680	4	6	31,684	6	9
Markets and Market Wharf .....	5,638	6	4	.....	.....	.....	.....	.....	.....	5,638	6	4
Fees and Fines .....	2,786	10	9	.....	.....	.....	.....	.....	.....	2,786	10	9
Government .....	10,000	0	0	35,000	0	0	61,474	5	8	106,474	5	8
Removing Night-Soil and Rubbish .....	1,091	6	7	.....	.....	.....	.....	.....	.....	1,091	6	7
Re-payment for foot pavements .....	1,035	7	1	.....	.....	.....	.....	.....	.....	1,035	7	1
Debentures .....	9,200	0	0	.....	.....	.....	.....	.....	.....	9,200	0	0
Miscellaneous .....	227	4	10	1,234	13	2	17	17	0	1,479	15	0
Debentures on hand 1st. January, 1856 ..	53,982	17	10	36,234	13	2	69,172	7	2	159,389	18	2
Balance, 1st January, 1856 .....	.....	.....	.....	4,180	0	0	.....	.....	.....	4,180	0	0
	.....	.....	.....	.....	.....	.....	16,740	17	11	16,740	17	11
Balances Dr., 31st October, 1856 .....	53,982	17	10	40,414	13	2	85,913	5	1	180,310	16	1
	9,755	8	3	6,253	18	3	6,230	2	4	22,239	8	10
	63,738	6	1	46,668	11	5	92,143	7	5	202,550	4	11
<b>EXPENDITURE.</b>												
General Works .....	24,782	5	0	39,104	18	3	53,943	2	5	117,830	5	8
Lighting .....	2,628	4	11	.....	.....	.....	.....	.....	.....	2,628	4	11
Markets .....	1,542	18	8	.....	.....	.....	.....	.....	.....	1,542	18	8
Salaries and Law Charges .....	3,115	2	2	2,630	6	2	2,617	6	2	3,362	14	6
Office Expenses .....	299	8	2	299	8	2	299	8	2	898	4	6
Interest .....	1,521	13	10	3,024	3	7	1,666	4	4	6,212	1	9
Cleansing Privies .....	1,080	8	4	.....	.....	.....	.....	.....	.....	1,080	8	4
Lime-street Wharf .....	2,556	3	5	.....	.....	.....	.....	.....	.....	2,556	3	5
Paving footpaths .....	2,618	2	5	.....	.....	.....	.....	.....	.....	2,618	2	5
Miscellaneous .....	27	15	0	37	10	0	174	0	8	239	5	8
Compensation for Land resumed .....	.....	.....	.....	.....	.....	.....	25,843	5	8	25,843	5	8
Debentures paid to City Fund .....	.....	.....	.....	.....	.....	.....	7,600	0	0	7,600	0	0
Balances, 1st January, 1856 .....	40,172	1	11	45,096	6	2	92,143	7	5	177,411	15	6
Sums outstanding 31st December, 1855 ..	10,380	0	1	1,572	5	3	.....	.....	.....	11,952	5	4
	13,186	4	1	.....	.....	.....	.....	.....	.....	13,186	4	1
	63,738	6	1	46,668	11	5	92,143	7	5	202,550	4	11

## APPENDIX D.

SCHEDULE shewing the Total Amounts received and paid by the City Commissioners on the City, Sewerage, and Water Accounts.

	Totals—Two Years and Ten Months, from 1st January, 1854, to 31st October, 1856.									Grand Total, Two Years and Ten Months.		
	City.			Sewerage.			Water.			City, Sewerage, and Water.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
<b>RECEIPTS.</b>												
Rates .....	51,929	0	4	.....	.....	.....	18,003	2	1	69,932	2	5
Markets and Market Wharf .....	15,110	7	4	.....	.....	.....	.....	.....	.....	15,110	7	4
Fees and Fines .....	7,481	0	9	.....	.....	.....	.....	.....	.....	7,481	0	9
Government .....	40,000	0	0	140,750	0	0	98,854	5	8	279,604	5	8
Removing Dead Animals .....	133	5	6	.....	.....	.....	.....	.....	.....	133	5	6
Removing Night-Soil and Rubbish .....	5,616	3	6	.....	.....	.....	.....	.....	.....	5,616	3	6
Forming private Streets &c. ....	1,002	7	9	.....	.....	.....	.....	.....	.....	1,002	7	9
Re-payment for pavements .....	1,035	7	1	.....	.....	.....	.....	.....	.....	1,035	7	1
Debentures .....	18,100	0	0	.....	.....	.....	.....	.....	.....	18,100	0	0
Interest on Debentures (Water) .....	1,894	3	4	.....	.....	.....	.....	.....	.....	1,894	3	4
Miscellaneous .....	525	10	3	3,148	18	7	151	3	5	3,825	12	3
Actual Receipts .....	142,827	5	10	143,898	18	7	117,008	11	2	403,734	15	7
Balances, 31st October, 1856 .....	9,755	8	3	6,253	18	3	6,230	2	4	22,239	8	10
<b>EXPENDITURE.</b>												
General Works .....	99,349	19	0	137,765	2	8	75,660	1	0	312,675	2	8
Lighting .....	6,805	0	8	.....	.....	.....	.....	.....	.....	6,805	0	8
Markets .....	4,959	9	0	.....	.....	.....	.....	.....	.....	4,959	9	0
Watering streets .....	664	19	8	.....	.....	.....	.....	.....	.....	664	19	8
Removing Dead Animals .....	83	18	0	.....	.....	.....	.....	.....	.....	83	18	0
Salaries and Law Charges .....	10,578	9	6	7,778	6	3	9,409	4	1	27,765	19	10
Office Expenses and Furniture, &c. ....	1,839	2	10	1,547	14	4	1,547	14	5	4,934	11	7
Assessment .....	435	8	0	.....	.....	.....	.....	.....	.....	435	8	0
Interest .....	3,740	0	1	3,024	3	7	3,104	7	8	9,868	11	4
Cleansing Privies and Rubbish .....	6,023	12	8	.....	.....	.....	.....	.....	.....	6,023	12	8
Lime-street Wharf .....	6,021	3	5	.....	.....	.....	.....	.....	.....	6,021	3	5
Paving foot-paths .....	2,618	2	5	.....	.....	.....	.....	.....	.....	2,618	2	5
Sinking Fund .....	100	0	0	.....	.....	.....	.....	.....	.....	100	0	0
Compensation for Land resumed .....	.....	.....	.....	.....	.....	.....	25,843	5	8	25,843	5	8
Debentures paid to City Fund .....	.....	.....	.....	.....	.....	.....	7,600	0	0	7,600	0	0
Miscellaneous .....	458	12	9	37	10	0	174	0	8	670	3	5
Actual Expenditure .....	143,677	18	0	150,152	16	10	123,238	13	6	417,069	8	4
Balance, 31st December, 1853, including } Debentures for Water, £7,600 .....	8,904	16	1	.....	.....	.....	.....	.....	.....	8,904	16	1
	152,582	14	1	150,152	16	10	123,238	13	6	425,974	4	5

## APPENDIX E.

TOTAL Expense incurred, and to be incurred, in completing Mr. Randle's Contract.

	Cost to 10 Nov., 1856.			Cost to complete.		
	£	s.	d.	£	s.	d.
<b>MAIN SEWER</b> .....	23,395	12	8			
327 c. yds. lead $\frac{1}{4}$ m. to shafts, at 3s .....	£49	1	0			
200 " $1\frac{1}{2}$ m. to shafts, at 6s. 6d. ....	65	0	0			
30 c. yds. concrete for covering shafts, at 15s...	22	10	0			
360 ft. brickwork, at £42 .....	55	11	9			
					192	2 9
<b>PITT-STREET</b> .....	24,694	9	6			
20,249 ft. rendering to complete, at 5d. ....	£421	17	1			
8,931 ft. rendering, at 9d. ....	334	18	3			
$\frac{1}{2}$ rod brickwork, at £42 .....	21	0	0			
2 manholes, at £7.....	14	0	0			
					791	15 4
<b>MACQUARIE-STREET</b> .....	15,276	15	10			
2,840 ft. rendering to complete, at 9d. ....	£106	10	0			
1 manhole, &c. ....	8	10	0			
					115	0 0
<b>ELIZABETH-STREET</b> .....	16,336	4	8			
78 rods 114 ft. brickwork, at £42.....	£3,293	15	0			
16 ft. lineal driving, at £4 .....	64	0	0			
20,161 ft. rendering, at 9d. ....	756	0	9			
4,182 ft. rendering to complete, at 5d.....	107	19	2			
760 c. yds. lead, $\frac{3}{4}$ m., at 5s. ....	190	0	0			
5 manholes, 20 ft., at £9 11s. ....	47	15	0			
5 plates to do., at £2.....	10	0	0			
2,840 ft. lin. chase, at 3s. 6d. ....	497	0	0			
					4,966	9 11
<b>PHILLIP-STREET</b> .....	13,047	14	7			
4 rods 115 $\frac{1}{2}$ ft. brickwork, at £42 .....	£185	16	2			
63 c. yds. lead, $\frac{1}{2}$ m., at 4s. 6d. ...	14	3	6			
2,850 ft. sup. rendering, at 9d. ....	106	17	6			
1 manhole and plate.....	7	14	6			
7 ft. driving, at £4 .....	28	0	0			
					342	11 8
<b>CASTLEREAGH-STREET</b> .....	16,628	9	4			
130 ft. driving, at £4 .....	£520	0	0			
990 ft. chase, at 3s. 6d. ....	173	5	0			
36 rods brickwork, at £42 .....	1,752	0	0			
9,844 ft. super. rendering, at 9d.....	369	3	0			
600 c. yds. lead, at 6s. ....	180	0	0			
4 manholes and plates, at £9 12s. ....	38	8	0			
2,517 ft. super. rendering to complete, at 5d.	52	8	9			
					3,085	4 9
					9,493	4 5
Allowance for contingencies, say .....					500	0 0
Cost to 10 November, 1856 .....	109,429	6	7	9,993	4	5
Required to complete Contract .....	9,993	4	5			
<b>TOTAL, when completed</b> .....	£119,422	11	0			

E. BELL, C.E.

Gilbert

Gilbert Elliott, Esq., called in and further examined :—

1. *By the Chairman* : The Committee understand that you are desirous of explaining the construction you place upon the obligation of the contractor, as to sending in a weekly and daily account of the work executed? I do.
2. Will you state your construction of the terms of the contract? The contractor is not bound by his contract to deliver a bill of the amount due to him every fortnight; he is merely to make out and deliver, on Wednesday of every week, an account of every work put in hand. I have always, however, considered this clause, like many others in contracts, was inserted in order that it might be enforced, if required by the Engineer; for, as far as my own opinion goes, it is of no practical use whatever to the Commissioners, and I am quite sure, by the non-enforcement of it, that no injury has been sustained by the public in the way of over-payments to the contractor, or in any other way. As to the character and sufficiency of the works, I need only refer to the works themselves, and to the report of the Board of scientific and practical gentlemen appointed by the Governor General to inspect them; and, I may add, that no exertion on the part of the Commissioners was spared to ensure a faithful discharge of all the onerous duties entrusted to them, the carrying out of which was left entirely to their own discretion and judgment. I may also add, that I took the appointment merely upon the understanding that all the professional details were to be carried out by professional officers; in fact, I would not have taken the office for three or four times the salary, or any amount of salary, if I had believed I should be made responsible for professional details or calculations.

G. Elliott,  
Esq.  
21 Nov., 1856.

WEDNESDAY, 26 NOVEMBER, 1856.

Present :—

MR. EGAN, MR. GORDON, MR. JONES, MR. LANG,		MR. PLUNKETT, MR. ROBERTSON, MR. SCOTT, MR. WILSHIRE.
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R. JONES, ESQUIRE, IN THE CHAIR.

John Rae, Esq., called in and further examined :—

1. *By the Chairman* : Have you any further statements or returns which you wish to hand in to the Committee? On the last occasion that I was before the Committee I omitted to hand in a return connected with the City, shewing the City works performed during the three years since we came into office, the improvements on the streets generally, the kerbing and guttering, and the measurements of total quantities of the works performed, without specifying the localities.—(*The witness handed in the same, vide Appendix A.*) There are two other returns connected with the sewerage and water, which I have here; they are catalogues of the plans and drawings we have had prepared in our department since we came into office. (*The witness handed in the same, vide Appendix B.*)
2. Are the dates appended? Yes; and they also shew whether they were got up in Mr. Rider's or in Mr. Bell's time. I beg also to hand in another return, shewing the mains laid down in 1856. (*The witness handed in the same, vide Appendix C.*)
3. *By Mr. Plunkett* : Are all these plans forthcoming? Yes; there are references upon these catalogues to the plans and to the books where they are entered, which will shew where to find each of them.
4. *By Mr. Wilshire* : What arrangement did you make for the importation of water pipes from England? We advertised for tenders, in the usual way, to import them by contract.
5. Who obtained the contract, and at what price? We had two contracts; the first was for sending out a quantity of pipes for the distribution of the supply in Sydney, obtained by Messrs. Gilchrist, Watt, and Co., to the extent of about £10,000. That contract was accepted on the 14th of July, 1854. The price was to be the market price, and the business was to be done at a commission of five per cent., on the understanding that Messrs. Gilchrist, Watt, and Company, were to supply the money in England, and that we were to pay for the pipes merely on their being landed in Sydney.
6. Was that five per cent. on the prime cost? Yes, on the prime cost.
7. Freight and charges included? Freight and charges we paid. That was the most eligible tender we received, although we had several others at the time. The number of pipes that we received at this time under the contract were 2,500 4-inch mains, 1,500 6-inch, and 1,000 9-inch. The price, including commission and everything, we found to be—for the straight pipes, about £10 5s. 1d. per ton, and for the curved pieces, about £12 13s. 4d. per ton.
8. That is laid down here? That is laid down here, every expense included.
9. What was the freight generally paid? The freight varied; at one time it was 22s. 6d., at another 25s., and at another 32s. 6d., and so forth. The next contract for pipes was entered into on the 10th January, 1855. That was also called for in the usual way, and the tender of P. N. Russell and Company accepted. It was for the 30-inch main for bringing the supply of water from Botany to Sydney. The terms of the contract were two-and-a-half per cent. commission on the first cost, with this difference, that the money was to be paid by us in England on the production of the bill of lading to the Bank there.
10. Can you state what arrangements you made for the payment of the money in England? We entered into an arrangement with the Joint Stock Bank for £50,000, at an exchange of 8 per cent. We were to pay that amount for supplying money to a certain extent to us  
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in England, and we gave them the dates, as nearly as we could, when the money would be required to be supplied—so much per month. Latterly we have had to extend that for an additional contract, respecting which I will presently speak.

11. Was that arrangement through the Bank made by tender? We may call it similar to a tender. Inquiries were made at the other Banks on what terms it would be done; and in consequence of these inquiries, the original terms proposed by the Bank were reduced 1 per cent.

12. Were those inquiries made of private parties? Yes; I inquired myself of different gentlemen, and I found that the arrangement of the Bank was considered very reasonable.

13. Will you now state the cost per ton of the 30-inch pipes? The 30-inch pipes, including commission, exchange, wharfage and everything, was £10 18s. 5d., as near as I can make it up, per ton. That is only a little above the former contract for the smaller ones. The number was 2,200 ordered, and there were delivered sound on the ground 2,142; for the rest we had a claim on Messrs. Russell to supply them at their own cost. I may state that the weight of each main pipe is about thirty hundredweight.

14. At what price could these iron pipes have been obtained in the Colony at the time? If I may judge from what has recently taken place, I think they would have cost double this sum. Recently we have entered into an additional contract for the completion of the line of the 30-inch main, and we found, after getting tenders from different ironfounders in the place, that it would have cost just double the price for which we could obtain the same article from England, including all costs. We found, also, that there would have been no saving of time—that it would have occupied as much time to have performed the contract in Sydney as it will do to get the pipes from England. We should also have had all the risk of getting an inferior article. The additional contract we have entered into for landing the pipes in Sydney is with the same firm, for £11 7s. 6d. per ton, including all costs. Their sizes are as follows:—900 30-inch, 350 20-inch, and 420 12-inch.

15. The pipes originally cost £10 18s. 5d. per ton? Yes; £11 7s. 6d. includes all the risk. The pipes are to be landed in Sydney within a specified time—thirteen months.

16. I thought you said before that the contractor took all the risk, and would supply pipes in the place of those that were broken? Yes, he is to do so in the former contract, except the change in freight or pig iron. This is the cheapest contract we could obtain at the time, and Mr. Bell reported to us, taking even the former contract into consideration, that he considered it a more advisable way to carry it out to fix a price per ton including all risks, and we went upon his opinion.

17. Do you know what his reasons were for recommending such a course? His reasons, I presume, were simply that although these pipes at this time cost only about £10 18s. 5d., he calculated that as the price of pig iron and freight was so variable, it was just as likely the next pipes would be £15 as £10 a ton, and the contractor agreeing to take the chance of the rise or fall of the market, it was thought desirable to accept his offer.

18. Is there not as great a probability of the fall of freight—are you not aware that freights have greatly fallen within the last eight months? Freights fall and rise, of course; they are variable quantities; however, the matter was fully argued at the time. It was originally our intention to carry out the same contract, until Mr. Bell suggested to us that it would be far better for us to know exactly beforehand what sum the pipes would cost when landed in Sydney, instead of the Commissioners taking the chance of the rise and fall of pig iron in England, or any risk of rise and fall of freight. Another advantage was, that we could bind the contractor to land them in Sydney within thirteen months.

19. Can you state the lowest price at which the pipes were ever purchased by the Commissioners or the Corporation in the Colony, and what was the highest price ever paid? I think the lowest price at which the Corporation ever purchased was a parcel in 1850, at £9 10s; the lowest price given by the Commissioners was £9 15s. per ton. The Corporation have paid as high as £12 9s. 6d. for 3-inch mains.

20. What is the highest tender you ever received? We have paid £15, £20, and different prices. The tenders we lately received for 30-inch mains, to be cast in Sydney, were from £21 7s. 6d. to £24 per ton. You will find that this is a cheap price for the 30-inch mains. They naturally cost more by the ton than the smaller ones. We have bought different quantities of pipes as they have been landed, occasionally. We bought some from Captain Neatby, of the "La Hogue," on one or two occasions.

21. By Mr. Lang: That had been brought out on speculation? Yes. It occurs to me that they were rather under £10 than over it; I think something like £9 15s. I know we have paid different prices, but our Engineer reported, as I have stated, that he considered this price very reasonable, under all the circumstances, for completing this contract.

22. What arrangement did you make for carrying out the clause in the Act respecting the watering of the streets in Sydney? We found that a difficulty arose from the construction of the clause, which required two-thirds of the citizens to petition before a street could be watered; and we obtained an alteration of the Act to enable us to water any street without such petition. Since then we have watered George-street, and a portion of Pitt-street, York-street, Wynyard-street, William-street, and South Head Road. These are the only streets I remember at present that have come under our notice. We found some difficulty in obtaining a sufficient quantity of water for the purpose.

23. What water do you generally use? In some places we are obliged to use the water from Hyde Park, in others we use water from pumps that we have established at different parts at both ends of the City, and from the sewers.

24. You have not stated how that work was carried out, whether by tender or otherwise? It is carried out by day labour, by our own horses and carts. We have on several occasions called for tenders, but we have found by calculation that the tenders were at a much higher price than it would cost us to do the work ourselves. You will perceive that it is rather a difficult work to tender for, as there are a number of wet days to be taken into account,  
and



and we have this advantage, that when we are not watering the streets we can turn our horses and carts to other purposes.

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25. *By Mr. Plunkett:* In what other ways do you use the horses and carts? In the usual works of the City. We have several horses and carts besides those used in watering the streets, for carting gravel and doing other works, so that when our horses are not employed in watering the streets they are not standing idle.

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26. *By Mr. Wilshire:* You bought the horses and carts? Yes.

27. Were they bought by tender? They were bought at sale, I believe, generally. I may state that it was my co-Commissioners who purchased them, for I am not a good judge of horseflesh. I think they were bought at sale, in the usual way.

28. Do you recollect what price was paid for your horses, and how many were bought? I think altogether there were seventeen horses, and they cost, at an average, about £42 each. They were purchased chiefly in the early part of 1854, when horseflesh was very high. They are stabled at Carter's Barracks, free of expense.

29. Can you state what the keep of the horses has cost on the average weekly? For a considerable period they were tendered for, in the same way as the horses belonging to the Government Departments, and the tender of Mr. Johnson was accepted, but since fodder has fallen, it has been found to be cheaper to purchase the fodder ourselves.

30. Is that purchased by tender too? It is purchased at the market by one of our officers. Mr. Thompson, our Clerk of Works, I believe, generally superintends that part of the business, and sees the forage weighed out.

31. Were not the horses turned out some time ago? A few of them were occasionally on the Swamp. They got rather poor, and were sent out there to improve their condition, and as they improved they were brought in.

32. Did any of them die while they were there? I think during the whole of our time we have lost three of our horses.

33. Do you know what became of their bodies? I cannot tell. I presume our inspector attended to the bodies. I do not know.

34. *By Mr. Scott:* I believe you were with the Corporation previously to being appointed a Commissioner? Yes.

35. Can you state what the metal for the streets cost the Corporation immediately before the Commissioners took charge? I know it was a very small sum. I think it was, but I am speaking from memory, something like 7s. or 8s. per ton; I know it was very small in comparison with what we pay.

36. What do you pay, or have you paid for it? We have paid 19s. or 20s., and it has been higher even than 20s. Do you mean merely the expense of the metal itself?

37. Yes? I think about 20s. may be said to be the average of what we used to pay when we came into office.

38. Can you explain to the Committee the cause of this difference of price? I think the simple explanation is, the difference in the prices of all other articles that prevailed at the time.

39. At the time that the Corporation ceased, and the Commissioners came into office, was there this sudden rise, or had the Commissioners the metal supplied to them at 7s. or 8s. before it rose to 20s.? I have no recollection of a sudden rise in the price of metal between the time of the Corporation and of the Commissioners, but I only recollect the sudden rise in the price of every thing in consequence of the gold fields discovery.

40. It was the same price until the gold fields discovery? I believe so. We, of course, took every means to obtain metal in the cheapest way we could by inviting tenders for it; we have always been able to obtain metal from ships bringing it as ballast at a much cheaper rate than from Pennant Hills. We have had it 8s., 9s., and other prices from vessels.

41. On the last day of your examination you stated that you would, if you could find them, produce the testimonials of Mr. Rider, Mr. Mais, and others? I stated at the time that I did not anticipate we had them, and on inquiry I found we had not. We do not generally keep testimonials.

42. Have you any recollection of the contents of these testimonials? The only recollection I have of them is, that they were from professional persons in England, Engineers of eminence, but I cannot charge my memory with the names of the parties. I remember that they were high testimonials, as far as we could understand; and in addition to these testimonials Mr. Elliott, our chief, reported to us, that Mr. Fanning, merchant in Sydney, had spoken in the very highest terms of Mr. Rider, in consequence of some communication he had from a gentleman in England who could not be mistaken on the point, who spoke of him as an Engineer of considerable standing. That, I may say, was the principal reason why we gave the preference to Mr. Rider coming, as it did from a party who had known him so recently in England. I may state that I was perfectly ignorant of his name until he applied to us. I had never heard of him.

43. In allusion to the contract with Mr. Randle, it is stated that Mr. Randle is required to make out accounts at certain periods—has he ever done so, weekly, monthly, or quarterly accounts? I stated, I think, on my last examination, that we had not called upon him to make out weekly or daily accounts till December last, but that he has made quarterly accounts from the commencement; and I think I explained at the last meeting with reference to the first quarterly measurement, that of September, the reason why it ultimately merged into the December one.

44. Do I clearly understand you that he made quarterly accounts? Yes.

45. That he ever did so during the time that Mr. Rider was Engineer? Yes, unquestionably; he could not be paid his per centage without such accounts.

46. Because I see in the examination of Mr. Randle himself—I have not referred to Mr. Darvall's evidence—Mr. Randle states, in reply to the question "If the Committee have been informed by Mr. Darvall that you never sent in such a bill, is that correct? I sent

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"in a claim for that amount," and if you read a little farther that "claim" refers to a sum total mentioned in a letter? I think if you refer to Mr. Randle's evidence you will find that he states he was under the impression there was a bill; but whether *he* was under the impression or not, I have no doubt about it; it is in the office now, and was sent at the time.

47. At the time of this examination, 23rd November, 1855? Before that examination. Mr. Randle's letter is dated 12th October, 1855, claiming the 10 per cent. stopped by us on the works done to the 30th September, and the balance on works done since. The fact is, that we did not pay the 10 per cent. balance upon the first quarterly measurement, because we had given instructions to have it carefully re-measured by our Engineer personally by himself and by Mr. Hooper and such other assistants as might be considered necessary. At this time we had some doubts of its correctness.

48. That is the October one? No, the September one. Our instructions to our Engineer are dated 17th October, 1855, to make a personal inspection of the works, assisted by Mr. Hooper and others, before we would make a payment upon it. This is the letter referred to:—"I am directed by the City Commissioners to request, that you will be pleased to furnish them with a full measurement of the work executed by the Contractor for Sewers up to the 28th ultimo, such measurement being conducted by you personally, in conjunction with your assistant, Mr. Hooper, and such other assistants as you may deem necessary to employ, in order that the correctness of Mr. Randle's account to the date referred to, forwarded in terms of the conditions of contract, may be ascertained.

"C. H. WOOLCOTT, Secretary."

49. Who is that addressed to? To Mr. Rider, the City Engineer at the time.

50. I would wish to know if Mr. Randle ever sent in a proper account, an account containing all admeasurements? Yes; the account was sent with this letter of his in which a claim was made. All letters as they come in are pasted into a book, and I found in this book the account in full connected with the claim which was sent in,—and this had been pasted in at the time.

51. Mr. Randle says, "I sent in a claim for the amount," was that a letter of account? I think a letter. I state distinctly that it was sent in with it, and was pasted in our letter book at the time.

52. Containing the measurements? Yes. When I was before examined, I was perfectly confident about this quarterly measurement, but I could not lay my hand upon it at the time; I could not conceive what had become of it, until since last meeting of the Committee, I found it, as I have described, appended to his letter.

53. He has subsequently sent quarterly ones? Yes.

54. Does he certify that these measurements are correct when he sends in a claim? No, he certifies to nothing; he merely sends in a quarterly account of works performed, and our Engineer, assisted by whatever assistants he may have, makes another quarterly statement to us, and, no doubt, compares it with the one sent by Mr. Randle.

55. How do these two accounts agree in the items, I do not mean in the sum total on the various items—how do Mr. Randle's and Mr. Rider's accounts agree? The quarterly account of Mr. Randle and Mr. of Rider were so similar that they appeared to us to be almost copies of each other; that is the September one, and the consequence was that we wrote to our Engineer to make a strict personal examination, to see whether there was any mistake in it before we should pay. That is the letter to which I have already referred, dated 17th October.

56. Subsequently Mr. Randle sent in his own accounts, without any reference to, or copying from Mr. Rider's? The December account was sent in separately by Mr. Randle, by Mr. Rider, by Mr. Mais, and by Mr. Hooper, so that we had before us four separate measurements in December.

57. That was subsequent to this report? Yes.

58. Do you think this report had any influence in the alteration of your plans in getting in the various accounts you now get? As regards the quarterly accounts, not the slightest. It was always intended to make the most perfect examinations we could at the quarterly settlement; of course, the fortnightly settlement we looked upon as mere rough measurements, as payments on account, but the quarterly accounts we looked upon as correct, because it was upon them we had to pay up the per centage.

59. Then these quarterly accounts up to September you considered to be quite correct? No. I stated that the quarterly accounts in September we had some doubts about, and we called upon our Engineer to inspect the works personally himself, with his assistants.

60. What made you doubt—whom did you doubt—did you doubt your Engineer? It is some time ago now; but, from the letters that were written at the time, it is quite evident that we must have been dissatisfied in some way or other with the September account, because we called for a separate account to be given by our Engineer.

61. I will call your attention to some of the items included in the account appended to the evidence given before the Select Committee of last year. I will begin with the junction collars. I find the first mention of junctions is on the 19th of July; he puts down at that time 12 junctions; on the 1st of August it is still kept at 12 junctions; on the 30th of August it is still 12 junctions; on the 13th September it goes to 95 junctions; on the 27th of September it is 95 junctions again,—corroborating the previous statement—on the 11th October 95 junctions again; that is the third time, as if there were no error. On the 25th of October it goes to 480 junctions, and then again the last account sent in, which is the 8th November, 464 junctions are charged for—how do you account for all these variations? No doubt there is a gross error—a clerical error with reference to the 480 junctions; the other part is easily accounted for. You will observe that the increase goes on step by step until the number of junctions came to 95, which was understood to be the complete number, and that number was arrived at by taking the whole length of the street and dividing it by 30, the number of feet distance at which the junctions ought to have been

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left. The Engineer considered that that was sufficiently near for making a partial payment. 480 is clearly a clerical error, which can neither be accounted for nor palliated; but you will observe that the party who made that clerical error brings it back to the right thing in the December quarterly measurement.

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62. No, the last is 464? That is 464 and 16, or 480.

63. Does not that rather increase the error when upon having his attention drawn to it he—? There is no accounting for it but in the way I have stated.

64. You know that Mr. Bell has reduced even the 95 to 57? There is a difference of about 5 junctions, or twenty shillings, between Mr. Bell's March and our December measurement. What I mean to state is, that these errors took place in our fortnightly measurements; but, in our quarterly measurements, we endeavoured to get these rectified, and I think you will find in our December measurement that these were put straight, or nearly so.

65. I find if it is a clerical error it involves an amount of £312, the difference between 480 junctions, at thirteen shillings, and ———? At that time, in taking the measurements from the section, he had anticipated there were junctions of the kind he mentioned, but in going down the sewer for the quarterly measurements he found they were merely collars, or places for junctions, and charged for them accordingly.

66. Was it Mr. Mais or Mr. Rider who certified to this? They both certified.

67. They both certified to things they could not possibly know? Yes. I have explained how the error arose, as far as I am able.

68. Still it appears that they must have certified deliberately to things they knew nothing about, for they charge for junctions at 13s. where there were only junction collars at 8s. They charge for 480 junctions at 13s., while Mr. Bell charges for 57 junction collars at 4s. The one amount being £312, and the other £11 8s? Yes; but, in the December measurement, there was a difference of only 4 or 5 junctions.

69. I find also here that the whole of Macquarie-street to this date—I refer to the return of the 11th October—amounts to £18,816, and on the 8th November, which is a fortnight after, I find the Engineer certifying to the correctness of another account, which states that the cost of Macquarie-street has been £16,588 18s., making a difference of two thousand two or three hundred pounds—how do you account for that? I account for that in the way I have before stated, that this diminution was made subsequent to our letter of the 17th October. I have no doubt that was in consequence of our letter.

70. And they certified that this £16,588, as regarded Macquarie-street, was perfectly correct, and that they had measured the work? Yes, we understood so.

71. I find according to Mr. Bell's admeasurement, that he makes it £15,242 10s. 11d.? In our December measurement, which was our first great measurement, completed before Mr. Bell came into office, our Engineer and his assistants, Mr. Mais and Mr. Hooper, certified to the correctness of the quarterly measurement up to that time; but there is no doubt, in consequence partly of what was taking place out of doors with reference to the rock and soil questions, we deemed it advisable not to trust entirely to the certificates we had received from our Engineer, but to call in the assistance of a professional gentleman quite unconnected with the works, Mr. Plews, and on receiving a report from him, differing in some respects from the reports of our Engineer, we entered into a communication with the contractor, and, without going into the particulars of all that took place, succeeded in obtaining what I may call a compromise with the contractor, with reference to the prices to be paid for the streets south of Market-street, which compromise amounted to about £1,000, as far as I remember.

72. I see nothing about allowance for sums charged as rock, but reductions of absolute lengths. For instance, I see here "Macquarie-street driving"?— I think you will find it difficult to compare the items, because, as the last fortnightly measurement in March fell on the last day of the month, it was included in Mr. Bell's quarterly measurement to 31 March; but I state as a fact, that in the December measurement there was a sum, (I am speaking from memory), of about £1,000 or £1,100 included, which was not included in the March one, because it was struck off by us in the meantime, after the December measurement was certified.

73. The Commissioners then did their best to rectify the error? Yes, and to prevent overpayment.

74. I wish to know whether the Commissioners, seeing these repeated and continual errors, not once, but continually occurring on the part of Mr. Rider and Mr. Mais, had no suspicion raised in their minds as regards negligence? We certainly had; it grew upon us, and we soon after dismissed them.

75. Will you state the dates; "soon after", you say—this is September—you had strong suspicion with respect to Mr. Rider and Mr. Mais? We had in December; we took a great part of the month of January to make our arrangement with Mr. Randle. At first we proposed to make it half and half, this he declined; then he made a proposal, which we accepted. The ultimate arrangement was made on the 15th of January, and on that very day Mr. Rider was dismissed.

76. That is to say, the matter was in contemplation from September to January? No; December was the first quarterly measurement that discovered these errors. You will find that in the December measurement these errors were corrected, as far as it was possible for us to get them corrected; and then by the middle of the next month, on the very day we made this arrangement with Mr. Randle, Mr. Rider was dismissed; his dismissal was to take place from the 1st of February. Another reason of his dismissal was the confusion into which he allowed his papers to get. This fault we saw to be growing on him weeks before.

77. Since Mr. Bell's appointment, has Mr. Randle sent in his weekly accounts according to the terms of his contract? He sends in weekly and daily returns, which are satisfactory to Mr. Bell.

78. He did not do that before Mr. Bell's appointment? Not till December, as I mentioned in my last examination; that was before Mr. Bell came.

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79. Was that in consequence of the Report of the Select Committee? No doubt it was. When our attention was directed to the matter we wrote for them.

80. Do the City Commissioners think it their duty to hold their Engineer and other officers under check—to have any kind of supervision over their conduct? In what respect?

81. As regards their duty to you? I have mentioned that we considered this part of the duties referred to in the contract was professional, that it was intended for the Engineer, and not for the Commissioners.

82. You would consider that whatever Mr. Rider or his assistant certified to be correct, whether they certified to driving in rock or to open cutting was correct, without ascertaining whether it ought to have been open cutting or tunnelling? I do not say that. We had our eyes open as unprofessional men, and of course, acted as far as we could, as a check upon the Engineer. But with reference to checking his daily and weekly returns, we looked upon that as part of the duty of the Engineer himself.

83. I am now alluding to the contractor driving or not, as he pleased, with the concurrence, of course, of Mr. Rider—would the Commissioners come forward and forbid the contractor from driving in a certain locality, and say it ought to be an open cutting, supposing Mr. Rider certified that it should be tunnelling? We could do it certainly, but we would be most unwilling to take the responsibility, unless we saw a very clear reason. It would have been involving a great responsibility.

84. I am now alluding a great deal to Macquarie-place, where there was tunnelling performed, and respecting which Messrs. Hume, Blackett, Houson, and Lennox, concur that it ought to have been open cutting? Yes. I may state that when the driving in Macquarie-place commenced, that is near the "Star Hotel," where the junction with Bridge-street takes place, I observed it myself, and conceived that it ought not to be tunnelling there. I went to the office and expressed my opinion to my brother Commissioners. Mr. Darvall went down to Macquarie Place, and, upon seeing it agreed with me that it ought to be open cutting, in consequence of the small depth of soil above it. We immediately called the Engineer before us, and explained to him, in fact, very strongly our opinion on the subject. He said he quite agreed with us that it should be open cutting for a certain distance; he did not state how much, but that the contractor was doing this as driving for his own convenience, and that he would only charge for it as open cutting.

85. Was that the case as regards the charge? There was no distance specified I think, when the work was commenced; but there was a portion charged as open cutting, which, I presume, refers to the place we had alluded to.

86. You are, of course, aware that open cutting and tunnelling are very different in price? Very different. That was one of the earlier parts of the work.

87. I see that the charge for driving in Macquarie Place, I presume it is, is £11,120—that would nearly all have been saved if it had been open cutting there? I do not think so.

88. I mean the best portion of it? I remember, before the contract began at all, taking the same view of it that you do now, and stating at the Board, that, as the driving in rock was so much more expensive than the other process, it would be for the advantage of the Commission to have as little driving as possible, consistent with the public convenience. The matter was argued for a long time, and repeatedly; and the reasons that were given for preferring the driving in the places where it was performed, were sufficient to satisfy me that the saving would not have been nearly so much as you imagine.

89. I can understand that with deep cutting? Yes; but we have, besides the actual expense of cutting, to look to the public convenience. It was submitted, that the making of an open cutting in Pitt-street, for instance, would have interfered with the water-pipe, the large nine inch main, and also with the cross drains. In addition, it would have cut up the metalling of the street, which it would have required considerable time and expense to consolidate. We had further to consider the expense of carting away the soil, and of bringing it back again, which would have been necessary, unless we had wished to prevent people getting into their houses. These points were all brought before us, and it appeared to me that the saving of expense would not have been so much as to counterbalance the advantage we should gain by tunnelling.

90. *By Mr. Plunkett*: Do you not remember another objection made to open cutting in populous streets was, that it would be necessary to stop passengers when blasting was going on, least they should receive injury? That was stated as one of the principal objections to open cutting. The tunnelling or open cutting was not done hap-hazard, or without giving the matter every consideration.

91. *By Mr. Scott*: I was chiefly confining my questions to Macquarie Place, because in Pitt-street, Castlereagh-street, Elizabeth-street, and Macquarie-street, the depth of the sewer is much greater, and the streets are more populous. I think you stated, that both Mr. Darvall and Mr. Rider were of opinion that there should be open cutting at Macquarie Place—if that were their opinion as well as your own, why was it not carried out? The reason we had from the Engineer was, that Mr. Randle was carrying out the tunnelling for his own convenience, so as to prevent any expense that might arise from blasting and injuring the houses.

92. I see                    feet of tunnelling charged for—is that over and above what was done by Mr. Randle for his own convenience, or has he charged for the whole? The portion alluded to I understood to be that near the "Star Hotel." I saw from the cutting there that the soil was very small above the tunnelling; that drew my attention to it; but how far that went I do not at this moment remember; Mr. Bell will be able to give this information. Macquarie Place runs from this place to Macnab's store, which will be a distance of nearly 400 feet.

93. You have referred to Mr. Plew's report? Yes.

94. Did the Commissioners consider that satisfactory, with reference to the definition of rock and soil? We did; we considered it so satisfactory as to act upon it, and obtain the compromise I have mentioned with Mr. Randle.

95. Is there any difference between the present work and that to which the Report of Messrs. Hume, Blackett, and Houson refers, with regard to the brick-work and rendering? I am not aware that there is any general difference in the works. The brick-work, with the exception of a portion of that in Bridge-street, which was understood to be rather defective, I believe to have been good; and the bricks, generally, are, as far as I can judge, similar to what they were formerly. The rendering is decidedly better; many portions of the rendering which were defective formerly have been put to rights, with the exception of the lower part, or bed, of the sewer in Pitt-street, which is filled with water, I believe the whole of the rendering is completed, or nearly so.

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96. I believe the contractor has, since this inquiry commenced, repaired, and altered a good number of his previous works? We have given instructions to Mr. Bell to insist upon every part of the work being put right that he discovered to be wrong. I understand that, in the main tunnel, in many places in driving they have gone out of the line, and the contractor has had to straighten the line at his own expense. In this way Mr. Randle has, no doubt, suffered serious loss. Mr. Bell states that, in some places, he should not be surprised if the driving has cost nearer £25 than £5.

97. Have you heard a lump sum stated of what it would cost Mr. Randle to make the works good? No; Mr. Bell will give you that information. Our instructions to Mr. Bell were, to find out everything that was in the slightest degree defective, and to get it put right at the contractor's expense.

98. Had it not been for the researches of Mr. Bell and others, I presume Mr. Rider would never have found out these deficiencies or bad works? Of course I cannot state that. It is impossible to say what might have been done. Our intention was, at the end of every quarter to get the work measured correctly; and it was always stated by us that, before final payment, the opinion of parties quite unconnected either with the Commission or the contractor, should be taken.

99. With respect to the Water Works—what is the area of the land through which the water filters for the supply of Sydney? The total area has not been ascertained. It has been estimated roughly to contain 1,500 acres for the supply at Lachlan Swamp. It would be much more for the supply at Botany—probably not less than 10 square miles. The water reserve at Lachlan Swamp contains 340 acres, and the land reserved at Botany 75 acres 2 roods.

100. What fall of rain do you calculate upon per annum—how many feet? Speaking from memory, I think it is about 40 inches. The daily supply from Lord's is, on the average, four million gallons a day. Mr. Bell estimated that, during the last rain, fifteen millions of gallons ran into the sea per day.

101. What arrangements have you made with respect to paving? We have entered into a contract with a party to lay the paving at a certain price, which price we charge the proprietor, or party in possession, of the house in front of which we lay down the paving.

102. With respect to the pavement taken up? That we look upon as the property of the Commissioners, but when the parties ask for it we invariably allow them to make use of it. On several occasions parties have written to us, stating that it would be useful to them, and, considering that it was quite enough to require them to put down the new paving without giving up the old, we have given it to them. In fact, we interpret the act as favorably to the parties as we can. Mr. Weekes and Mr. Woolley, or the latter gentleman's successors, have applied to us for the old pavement. We entered into an agreement with the contractor who puts down the pavement, to let him have the old materials at a nominal price, but we had a special clause that any portions we might require we should be at liberty to keep.

103. With regard to Mr. Woolley, or his successors, an application was made to you, and you allowed the old paving stones to be kept back? That is my impression, because I know that is the rule we invariably adopt.

104. *By Mr. Egan:* With reference to the measurements of the sewerage, there appears to have been considerable mistakes—I allude, particularly, to Macquarie-street? Yes.

105. Had this work been properly inspected during its progress, there could have been no mistake in the measurements? I have endeavoured to explain that to the best of my understanding.

106. We will confine ourselves to the error in the number of collars? Most unquestionably not. If these had been measured in the tunnel, instead of being taken from the sections, there could not have been any difference beyond two or three.

107. Do you not think it was the duty of those who had to superintend these works to see that they were properly done, and to ascertain the number of junctions? Unquestionably: we have officers for the purpose, and their assistants.

108. Are you not aware that some of these works were completed and filled in before the final measurement was made? Yes.

109. Did the Commissioners examine the quarterly measurements when they were sent in, to see that they agreed with the fortnightly measurements? I believe they were compared to see that they tallied.

110. Are the fortnightly measurements recorded in the office now? Yes.

111. And the quarterly also? And the quarterly also; the daily and weekly, as far as they have gone; in fact, there are thick books in the office of these daily and weekly returns.

112. Has it ever been officially reported to you by any officer, that a large amount of work was defective, and that the immense sum of from six to eight thousand pounds has been paid by Mr. Randle to complete this work? No. I have stated what has been done in the main sewer.

113. You did not say the amount? I do not know the amount. I have stated that Mr. Bell reported to me, verbally, that he had no doubt, in some parts of that sewer, it would cost Mr. Randle £25, instead of £5, to put the sewer into proper line. He had got out of the real line of the sewer, which of course the contractor is bound to keep.

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114. *By Mr. Plunkett*: You depend upon Mr Bell's Report? Yes.
115. *By Mr. Egan*: Was there not an error in driving the line of the sewer near the Water Police Office—were not the lines driven so that they would not meet each other? It is that part to which I have alluded; it is in putting that right that this expense would be incurred.
116. Since the appointment of the Commissioners have they performed any work upon private property, for any individual, for which they have made a charge? Could you specify any instance?
117. Has there been any sewerage, or any work, performed by the Commissioners, for which they have been paid, on any private property? Yes; we laid down a sewer in Wynyard-lane, for which we received £500 from the proprietor. We also made, or bore a share of making, a road near the boundary line of Cleveland-street, and we received some £450 for that. That road was partly out of Sydney, and partly in it. We also expended some £300 or £400 on the Coogee Road, in consequence of cutting it up in taking our coals to Lachlan Swamp.
118. Can you give the names of any individuals for whom these works were performed? No, unless you can specify anything. I have no recollection of anything beyond cases such as I have mentioned; and all these are, in fact, public works. I do not consider them private works, although they were partly paid for by the parties benefited.
119. Are the expenses of these matters kept with the public accounts? Unquestionably; there is not the slightest difference made; you will find them mentioned in the lists I have handed in.
120. There was a contract with the Gas Company for lighting the City? Yes.
121. On what certificates did you make the payments to that Company? We found the same difficulty as the Corporation in getting any person to certify to the performance of the contract. The only party who used to do it was myself, and the only party who does so now is the secretary. He certifies when the account comes in that it is according to contract.
122. Have any deductions been made from the accounts for lighting the City? Yes. The way we arrive at these causes for deduction is this;—we obtain the assistance of the police, who report to us, regularly, when any lamp has been out in any part of the City, there is a regular record kept in the office, and a copy of this is sent to the Gas Company, when we make deductions from their account.
123. Have you any idea what amount has been deducted during the time the Commissioners have been in office? I find that deductions to the extent of £11 1s. 3d. have been made to the 30th September last.
124. Have the Commissioners entered into any contract for lighting the City within the last month? Yes; a new contract is in progress now.
125. Is that in consequence of the expiry of the late contract, or when does it expire? There was a difference of opinion in reading the contract. We read it that it expired in December last, and the Gas Company that it expired three months after,—it was a question of three months' notice.
126. Have you entered into any new contract? It is in progress now; if not completed it is in course of completion.
127. For any period? Only for one year. We did not like to extend it beyond that, because we were not satisfied with the price required.
128. It is stated that you are giving £1 a lamp more than you did before; is that correct? I believe it is so. The reason we gave notice to the Gas Company that we would enter into a new contract, and not allow the old one to run on, was this; when we entered into the last contract prices were at the very highest; the rise at that time was not quite, but verging upon, 100 per cent., and we naturally concluded that as prices, generally, had fallen considerably, by giving them notice of the termination of the contract, we should get more reasonable prices. To our great surprise the answer from the Gas Company was, that the price would not only not be reduced, but that it would be considerably raised. We wrote to them that under the circumstances, as we must either accept their terms, or leave the City in darkness, we would only take it for a year.
129. Do you know the difference between what the Corporation paid for lighting, and what the Commissioners pay? The Corporation paid £5 17s. 6d. a lamp, and now we shall pay, under the new contract, £10 5s.,—including, in both cases, the use of the pillars.
130. I suppose it comes within your knowledge that there is no greater expense in obtaining coals now, than when the preceding contract was entered into; has not the cost of coals been very much reduced within the last twelve months? Very much to the private consumer; and, I believe, also in public works.
131. I suppose it was upon that ground the Commissioners thought they might have a reduction in the cost of lighting the City? Yes.
132. I see there are many other contracts entered into by the Commissioners, are they also for only one year? Which do you refer to.
133. Are there any contracts that extend beyond the year? The Water Fountains—Dock-yard and Soldier's Point—were sold, the other day, to the end of 1857; we should have sold them, if we could have done so, to the end of the present year, but no one would take them for a few months. We wished to confine the contracts within our own time, knowing that we are going out of office soon.
134. *By Mr. Plunkett*: How long were you Clerk to the Corporation? Upwards of ten years.
135. Of course you were perfectly acquainted with their mode of conducting the business, and also with the accounts of the City? Perfectly so.
136. When you became a Commissioner was there any difference made in the mode of appointing the officers of the Commissioners, from that adopted by the Corporation? No; exactly the same course was pursued

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137. What was that? To advertise; to give public notice in the papers for parties to apply, and on receiving the applications, to sift them, as far as we were able, to the bottom, and to make the best selection we could. We also take advice from parties whom we consider better able to judge than ourselves. The only difference between our procedure and that of the City Council, is that they submitted the testimonials to a Committee, but as we have no committees, they are submitted to ourselves. To shew how anxious we were to get a proper officer—knowing that the success of the Commission depended upon the appointment of our Chief Engineer—we waited on Mr. Deas Thomson, who was on the eve of sailing for England, and suggested the propriety of his sending out an Engineer from England for us. We thought, from his position, he would be likely to come in contact with Engineers of eminence, and had little doubt he would be able to select a proper officer. It was fully agreed at the time, and the difficulty was pointed out to us that first rate men would be unwilling to come out here, and the probability that an inferior man might be sent. On the other hand we were urged by the late Committee of the Council to go on with the works; so that between the two we determined to appoint an Engineer in the Colony.
138. This was before the appointment of Mr. Rider? Yes. We knew perfectly well that everything would depend upon the efficiency of our chief officer.
139. In fact the appointment of the Engineer was the pivot upon which the success of the whole turned? Yes.
140. When you advertised, do you recollect how many applicants there were for the office? I do not remember; there were five or six only the first time. I think we had a considerable number more the second time, when Mr. Bell was appointed.
141. Can you state who they were? Yes; their names were entered on the Minutes, and are as follows:—Messrs. W. C. Bennett, E. Bell, Jno. Clune, F. Clarke, F. H. Grundy; J. Gwynneth, W. Hooper, J. Hewston, W. S. Lindsay, E. Lange, H. C. Mais, Jno. Millar, W. O'Hara, F. Perrin, J. Phillips, T. E. Rawlinson, H. Selfe, and J. H. Thomas.
142. Of course you had all the testimonials and certificates of competency before you? The whole of them; we went most carefully and anxiously into them.
143. Is it usual to keep these testimonials? Not with us.
144. Did the Corporation preserve them? I do not think so.
145. Do you make any note or memorandum in a book as to the testimonials or certificates of a candidate? I think upon the application are marked the number of testimonials which accompany it, and after the appointment takes place, a circular is sent to all the other parties, stating that they can have their testimonials on application.
146. Is there any list of testimonials that you can refer to? I think not.
147. Will you append to the evidence a statement of what the testimonials of Mr. Rider were? I will if we have a record of them, but the practice, as I have already stated, was to return the testimonials after the appointment was made.
148. What is the salary of the Chief Engineer? £800.
149. Was that fixed before you advertised or afterwards? It was fixed in our own minds before we advertised. I do not know whether it was stated. We thought we should offer a liberal salary, and that if we put the Engineer upon a par with the Commissioners that would be sufficient to command a man of talent and a good Engineer.
150. When Mr. Rider was dismissed, what was the course you took to procure your present Engineer? Exactly the same; we advertised for applications and received a considerable number. The course we adopted on that occasion was, as usual, to go carefully into the certificates, and, after sifting them as well as we could, we reduced the whole number to two, Mr. Millar, and the present Engineer, Mr. Bell. The testimonials of both of these gentlemen were of the highest description. Those connected with Mr. Millar were in the form of a book of printed testimonials, and Mr. Bell's were particularly good. We were very much in doubt between these parties, and I believe we should have made a good selection if we had taken either of them; but to assist us in our decision we suggested that Mr. Elliott should consult with Captain Ward, and after consultation with him we came to the resolution of appointing Mr. Bell. I may state that we gave Mr. Millar a testimonial stating that it was with difficulty we could make a selection, and I believe that assisted him in getting the appointment he at present holds, that of Engineer to the Geelong Water-works.
151. How long had Mr. Rider been in the Colony when he was selected? I did not even know him by name at the time he applied, but I think I have heard since that he had been in the Colony only about fifteen months. Mr. Bell was in the Colony a very short time, I believe only a few weeks, when he was appointed.
152. In what college or institution did Mr. Rider study? I am not aware. He is a Civil Engineer, and I suppose is a member of the Institute of Civil Engineers. I am not aware what the forms of that institution are.
153. Having employed him as your Engineer, as you have stated, in every scientific and professional matter, you depended upon him? Yes. I may call your attention to a report in the *Sydney Morning Herald* of the 6th of October, 1853, when the subject of the appointment of City Commissioners was introduced by the late Colonial Secretary, Mr. Deas Thomson. On that occasion he stated distinctly that it was his opinion that it would be more advisable to appoint unprofessional parties as Commissioners, and that the professional details should be left to the officers of the Commission, its Engineers and Surveyors. So that it was evidently the intention of Government in introducing the measure that the Commissioners, being unprofessional men, should be guided in all professional details by the officers of the establishment. I may also state that Mr. Elliott reported to us that the head of the Government had most strongly expressed his opinion upon this subject; that we were not at all answerable or responsible for anything that might be done by the Engineer; that we must trust to him as long as we had him, and that when we could not trust him we should dispense with his services. Mr. Elliott objected to being appointed, and was very unwilling to accept the office, on other terms.

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154. Who acted as Engineer for the Corporation? We had no officer analogous to the Engineer under the City Corporation; we had a City Surveyor, Mr. Clark, when we entered on office.
155. What is the distinction? Just the distinction between a Surveyor and an Engineer. A Surveyor is connected with the works and streets in the City—an Engineer is employed where more engineering knowledge is required. A man may be a Surveyor, I believe, without being an Engineer, but he cannot be an Engineer without being a Surveyor.
156. Mr. Clark was not a Civil Engineer? I do not think he signed his name as a Civil Engineer, but I am not sure; he called himself an Architect and Surveyor.
157. Was the sewerage commenced or thought of in the time of the City Corporation? It was often thought of, and there was a Report brought up upon the subject, stating the very great expense it would involve.
158. What professional advice had they upon the subject? Merely the advice of their own Surveyor, and the members of the Corporation.
159. Was that Mr. Clark, or was it when Mr. Shields was Surveyor? I think it was when Mr. Shields was Surveyor; he was a Civil Engineer. The Corporation never did anything with regard to the sewerage, simply in consequence of the enormous amount it would cost, and the impossibility of their procuring the necessary funds.
160. Did it ever occur to the Commissioners that a first-rate Engineer could not be induced to come out from England for a salary of £800 a-year, at the time Mr. Rider was appointed, when everything was so high and expensive? That was positively stated at the time, and we agreed, if we could get a first-rate man, even to go beyond that salary to secure his services. That plan was ultimately given up, and when we confined our choice to Sydney, we resolved upon the salary of £800.
161. Do you think if you had offered a larger salary, a more competent person than Mr. Rider could have been got at the time? I cannot say.
162. In the advertisement was the salary stated? No.
163. Were all those who made application told what the amount of salary would be? My impression is that they were not told what the salary was to be, but I am not quite sure.
164. *By Mr. Lang:* When your Engineer proposed plans for works involving an expenditure of some £350,000, did it not strike you that all this large sum of money might be lost by error in his calculations and levels, and that you ought to check those by another professional opinion? We did so to the best of our ability. The opinion of different professional parties was asked and obtained, but they were private opinions, which are not much to be depended upon. But, in addition to that, I may state that the original plan for the sewerage, and the report with it, were sent to His Excellency, the present Governor General, in consequence of his high engineering abilities. This led to a correspondence between the Governor and ourselves, through the Colonial Secretary, with reference to our discharging the sewage matter at Fort Macquarie. The Governor suggested that the natural bed of the Tank Stream should be taken, and that the outlet should be into Sydney Cove. This matter was fully discussed. Two reports were sent from our Engineer to the Governor. The original plan proposed by Mr. Rider for the main sewer was to run down Macquarie-street, and to continue in the line of that street till it reached the harbour. The suggestion of His Excellency was, that this plan of our Engineer might interfere with any future improvement that might take place in the continuation of the Circular Quay. We understood that His Excellency ultimately gave up this point, about the discharge of the sewers into Sydney Cove; the Engineer having shewed that it would be disadvantageous to the harbour and shipping there, and it was then proposed to get over the difficulty, about the Circular Quay improvements, by making the line straight across from the junction of Macquarie-street to Fort Macquarie. After this affair was settled we sent two reports of the Engineer, and his original report upon the sewerage, to His Excellency, with a request that His Excellency would be pleased to send them, for the guidance of the Commissioners, to any scientific parties, whose opinion might be thought desirable, as we wished to get every information in our power upon the subject. This was sent on the 10th of March, 1855, through the Colonial Secretary, and on the 16th March, we had an answer from the Colonial Secretary, stating that His Excellency had sent them to the Colonial Architect. Since then we have received no communication on the subject. On the 5th of April we sent the tenders we had received, and all particulars of the analysis to His Excellency, stating that we had accepted the tender of Mr. Randle as the most eligible. That is what took place with reference to the sewerage before the commencement of the work.
165. The result of all your inquiries, and of the submission of Mr. Rider's plans to the Governor was, that Mr. Rider was an Engineer whose skill you could trust? Yes, and the result, up to the present moment, is the same, with reference to his plan of the sewers. We have had opinions from different parties, including our present Engineer, Mr. Bell, and they have agreed that his plan is perfectly sufficient, in every respect, to secure a most efficient system of sewers for the City. Mr. Bell has not found it necessary to alter his particular plan, except the George-street portion of it, and I may state that we endeavoured to get rid of this portion of it ourselves; in fact it was never finally settled.
166. As you proceeded with the work you had no reason to be dissatisfied, so far as I can learn from your evidence, except as regards the confusion in which he kept his office? That was the first thing which drew my attention, and caused me to be dissatisfied with him. It was a matter of which I could judge myself, whether an office was properly kept.
167. I think you said that at the December quarterly measurement you had reason to be dissatisfied with him—was that as to his skill? No; we had reason to be dissatisfied with him specially with reference to that measurement; and in opposition to his certificate that a certain portion of the work was through rock, we called for the opinion of an Engineer unconnected with the works, Mr. Plews. No doubt our dissatisfaction arose partly from what was



was taking place out of doors—the discussion with reference the quality of the material. This, added to the errors which had previously been found out, did give rise to doubts about the correctness of his measurements and certificates.

168. You became convinced of this about December? Yes.

169. Do I understand that as soon as you lost confidence in Mr Rider you dismissed him, and got another Engineer? Yes; in the middle of January we did so.

170. In your evidence the other day I understood you to state, that if you had weekly returns from the Engineer and from the contractor, as is laid down in the contract itself, you might have checked them, and prevented much of the wasteful expenditure that did take place, or might have taken place? I do not think I went to that extent. I remember that one or two questions, put to me by the honorable Chairman, I had some difficulty in answering. What I endeavoured to bring before you on my last examination was this: We looked upon these things as belonging to the engineering department, and consequently never called for them till December; but, considering that great suspicion had been thrown upon all our proceedings ever since we had come into office, I admitted then, and I admit now, that it would have been better if we had insisted upon these things being done *pro formâ*, not that I believed then, nor do I believe now, that it would have been any check upon these returns, as whether the returns had been higher or lower we should still have had to trust to our own officer.

171. It would have prevented yourselves from being found fault with? Yes.

172. You looked upon these weekly returns, or fortnightly returns, merely as a check by the Engineer upon the contractor, with which you had nothing to do? Unquestionably we did; and I can produce a letter from an Engineer, lately arrived in the Colony, upon this subject, which will shew that it is really the practice, in all contracts of the kind, that this portion of it should be left to the Engineer and not to the Commissioner. The name of the party to whom I refer is Mr. G. E. Hamilton, C.E., Engineer to the Adelaide Water Works and Drainage Commission, and consulting Engineer to the Board of Main Roads, South Australia. This gentleman has come here for the purpose of examining our works before carrying out similar works in South Australia. I may add, that he is highly satisfied with the works, as far as he has seen them, and quite agrees with our reading of that part of the contract.

173. If these returns were necessary for the Engineer, do you not think you should have enforced his getting them from the contractor? We did not always know but that he got them; but after December we did enforce it. Up to December we did not interfere in the matter at all, conceiving that it was entirely the Engineer's business.

174. And having perfect confidence in him? And having perfect confidence in him. He certified to us, as you will find by his certificate, that the contract had been carried out in its integrity, which, of course, would include that all matters required by the contract were carried out.

175. Am I to understand that these stringent rules, laid down in the contract about daily and weekly returns, are like the provisions of a deed of partnership, which are framed so that no partner shall even hire a servant without the concurrence of his co-partners, not intended to be carried out into daily operation but to prevent any attempt at fraud? If I gather the meaning of your question, I should say yes. I think in all contracts there are clauses and penalties introduced which are never expected to be carried out;—that they are merely *in terrorem* in case of a party becoming restive and refusing to carry out other portions of the contract, and it would be merely annoying the contractor unnecessarily to require him to carry out to the letter every particular part of the contract.

176. *By the Chairman:* You regard these provisions, as to furnishing these weekly and daily accounts, as of that nature? I do, and I think if you read the contract, you will find that in the weekly returns he is not bound to specify quantities at all. Mr. Randle has always taken that view of it, and we have had to fight the matter with him inch by inch. Taking up the view of the late Committee, we insisted upon getting them; but if you read that clause of the contract you will see that it is quite capable of the construction he puts upon it. It is only the daily returns that are required to specify quantities. This is a specimen of what Mr. Bell receives now. Sometimes in the weekly returns quantities are put in; sometimes they are not. [*The Witness produced copies of the daily and weekly returns.*] This, Mr. Bell says, is all Mr. Randle is bound by his contract to give. It first states, "That the contractor shall make out and deliver to the said Commissioners, at their office, in King-street, on the Wednesday of every week, an account of every work that is put in hand, whether the same is completed or not." And it then goes on—"On every succeeding day, correct duplicate daily vouchers or accounts, in writing, of each day, and jobbing work executed on the preceding day, specifying, in detail, the quantities and measurements thereof,"—so that it is the day and jobbing work for which the measurements are required. Mr. Bell states the reason of that to be, that these day and jobbing works are not included in the contract, and therefore it is necessary that they should be sent in, in detail, but that in the weekly returns all we can require from the contractor is a simple statement of what works are in progress. We had a long correspondence with Mr. Randle upon the subject, and ultimately, as we could not get him to hand in these details, Mr. Bell insisted upon the fortnightly returns from him, which are not in the contract at all, specifying quantities and prices; although it is not in the contract, we still have the check in our hands as we can keep back the money.

177. *By Mr. Lang:* The fortnightly measurements, upon which you paid Mr. Randle on account, were only approximations to correctness? Yes; we looked upon them as rough measurements, so as to satisfy us that we were not paying beyond the per centage in hand. Holding this per centage, we were not so careful about these fortnightly measurements.

178. Then you only paid part of what was due? Yes.

179. How much? Ninety per cent.; we also had £1,000, which we held in hand as security.

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180. At the end of each quarter, when you paid up, the whole of the work that had been done during the quarter was measured? Yes; if we had carried out the contract we should have paid the amount for the September measurement, but we did not, for the reasons I have stated.

181. What means did you take at the end of each quarter to secure correctness? By instructing our officer to be very careful in his measurements, and by calling in the assistance of other officers who had not been specially employed in that service at all; for instance, Mr. Mais was the party employed under Mr. Rider in the usual sewerage works, and Mr. Hooper, who was the party specially employed in the water works, and resided at Botany, was employed on the quarterly measurements, to be a check upon Mr. Rider and Mr. Mais.

182. Did you consider the settlement at the end of each quarter a final settlement, or do you still retain it in your power to re-examine the works before a final settlement? We never considered any settlement final, and we do not consider the settlement final now, although, I believe, there is very little to settle between us. Mr. Randle is of a different opinion, and we had a lawyer's letter with reference to the December measurement, stating that he would allow any error in the works already performed to remain an open question, but protesting against re-opening the settlement in future accounts. We never agreed to that; we constantly protested against it.

183. You habitually used all this precaution at the end of every quarter? Always, until the appointment of the present Engineer, who has more assistants than the former. We have not called in any separate officer to examine Mr. Bell's measurements, as we have had no reason to suspect the correctness of any of them.

184. Have you any reason to believe that it is the custom among professional Engineers not to exact compliance with this clause for the production of daily, weekly, and fortnightly returns? I have already stated that I have had such opinions expressed to me. I have also alluded to the opinion of Mr. Hamilton, and I am anxious the Committee should believe that, in taking this view, we are borne out by the opinion of scientific men, who make a distinction between what is the Engineer's duty and what the Commissioner's duty. The Chief Commissioner asked Mr. Hamilton's opinion upon this subject, and he, in consequence, wrote a letter, of which the following are extracts:—

"Without stopping to consider the direct tendency, (of this clause in the contract) if acted upon, to entirely ignore the Engineer-in-Chief and his Assistants, and to throw, most improperly, a large amount of professional work on the Commissioners, I have no hesitation in saying that to work it out, in its integrity, would be thoroughly impracticable.

"In all contracts there are, or should be, clauses inserted to meet, as far as practicable, emergencies of every kind,—clauses in fact having for their object to protect the employer against fraud, and to keep that man up to his engagement who, after entering into it, may evince a disposition to act dishonestly; but it by no means follows that every clause of this kind, or indeed of any other, *must* be strictly adhered to *per fas aut nefas*. Great injustice, inconvenience, and obstruction might, and in all probability would, accrue from such a red tape mode of dealing with a contract.

"A Board have *their* particular duties to discharge—the Engineer *his*; and neither should attempt to *take* upon themselves what belongs to the other. If they do, confusion and disagreement will inevitably arise."

"To argue that a Board can, or should be expected to personally attend to all the working details, or that they should be held responsible for matters in the Engineer's department, is simply absurd. The Engineer is, and, from the nature of things, must be, the accountable person for all operations under his charge, and for all the demands arising therefrom; for the Board, either individually or collectively, to attempt to take upon themselves the details of his duties, or to permit or encourage the contractor, in any way, to step in between the Board and their Engineer, and thus ignore the proper functions of the latter, would be to produce confusion, and to place the Engineer in a false position, which would most injuriously interfere with the useful and effective discharge of his duties, and to which, in my humble opinion, no professional man who was *worth retaining*, would submit."

## APPENDIX A.

## STREET WORKS during the Administration of the City Commissioners.

	1854.	1855.	1856.
Ashfield Quarry .....	Opening quarry.		
Asphalte .....	Footpaths, laying.		
Argyle-street.....	Quarrying and forming .....	Repairs and fencing steps .....	Parapet walls and steps, and repairing.
Abercrombie-place .....	.....	Opening channels.	
Alfred-street .....	Repairing roadway .....	Ballasting .....	Drain.
Albion-street.....	.....	Fence erected, water channels.	
Anne-street .....	.....	Opening channels.	
Brisbane-street .....	Opening water channels.....	Repairing and opening channels.	Repairs.
Bourke-street .....	Cutting down and re-forming .....	Cutting down roadway, opening channels .....	Repairs.
Botany-road, Chippendale .....			
Bridge-street.....	Rough crossing, guttering, and repairing .....	Repairs, filling in footway, backing kerb .....	Repairing and pipe drains.
Bent-street .....	Opening channels and repairing drain.....	Repairing gutter and drain .....	Repairs.
Barker-street.....	Opening channels and repairing .....	.....	Crossing, drain.
Botany-street .....	Repairing, &c.		
Barrack-street .....	Forming and gravelling.		
Bathurst street .....	Rough crossing and repairing	Repairs, gravel and backing kerb	Gravelling.
Bank-street .....	Opening channels.		
Bay-street.....	Opening channels .....	Ballasting, gravelling.....	Post erected.
Barrack-square .....	Forming, &c.		
Boomerang-street .....	Repairing, &c. ....	Repairing and opening channels	Metalling & gravelling.
Bligh-street .....	.....	Repairing crossing.	
Botany-street, Chippendale .....	.....	Repairing, metalling, opening channels .....	Repairs.
Botany-street, Surry Hills .....			
Botany-road, Surry Hills .....	.....	Repairs.	
Brougham-place .....	.....	Opening channels.	
Brougham-street .....	.....	Repairing and opening channels	
Burton-street .....	.....	Repairs .....	Forming.
Brown's-lane .....	.....	.....	Drain.
Buckingham-street .....	.....	.....	Filling in.
Crown-lane .....	.....	.....	Filling in.
City (General Works) .....	Lighting lamps, watering streets, opening channels, obstructions, &c., posts erected, repairs of drains, crossings, pavements, &c		
Cleveland Paddock .....	.....	.....	Opening trench.
Cleansing Streets .....	Cleansing streets, yards, lanes, removing rubbish by dust carts, cleansing markets...	34,552 loads removed.	
Cleveland-street .....	Forming, repairing, &c. ....	Rough crossing .....	Repaired.
Chippendale-street .....	Opening channels, &c .....	Opening channels.	
Castlereagh-street.....	Repairing, &c., and crossings	Repairs .....	Metalled.
Campbell-street.....	Repairing, &c. ....	Water channel, gutter crossing.	
Crescent and Kent Streets .....	Repairing.		
Crown and Liverpool Streets .....	Rough crossings.		
Charles-street, South Head Road .....	Repairing channels. ....	Ballasting .....	Crossing.
Clarence-street .....	Cutting down, forming ...	Excavation, forming, cartage of flag, opening channels .....	Cutting and quarrying drain.....
Charlotte-place .....	Repairing crossing .....	Repairs .....	Excavation, repairing.
Cumberland-street.....	Repairing, &c., and crossings	Forming, repairing backing kerb	Repaired, bridge.
Crown-street .....	Opening channels, &c. ....	Water channels, repairs.....	Cutting down and forming.
Cleansing Waterclosets			
College-street .....	.....	Gravelling, water channel, repairing and opening channels ..	Cutting down, graveling.
Crescent-street .....	.....	Ballast, gravel, and repairing, repairs.	
Cambridge-street .....	.....	Forming, repairing.	
Campbell's-lane.....	.....	Repairs.	
City Wharf .....	Repairs .....	Stacking metal, repairing.	Four new jetties, forming road.

STREET

STREET WORKS,—Continued.

	1854.	1855.	1856.
Cooper-street.....	.....	Repairs.	
Crown-street, Miller's Point.....	.....	Cutting down, forming.	
Devonshire-street .....	Repairing .....	Repairing and opening channels, ballasting and gravelling .....	Repairing, ballast, gravel.
Domain .....	Excavating gravel.		
Dixon-street .....	Road crossings .....		Repairing.
Druitt-street .....	Crossings and kerbing .....	Forming, repairing backing kerb.	Metalling.
Dawes' Point Road ..	Repairing, forming channels .....		
Darlinghurst Road ..	.....	Repairing .....	Ballasting, gravelling.
Dowling-street .....	.....	Repairing and gutter crossing, ballasting .....	Filling in and draining, ballast.
Darlinghurst Gaol Road	.....		Forming & ballasting.
Dale-street .....	.....		Repairs.
Erskine-street .....	Forming and repairing .....	Repairs, gravelling.....	Planking face of jetty, repairs, pipe drain.
Elizabeth-street .....	Forming and repairing drains .....	Repairs .....	Repaired.
Edward-street .....	Repairing crossings .....		
Exeter-place .....	Repairing, &c. ....		
Essex-street .....	Repairing .....	Repairs.	
Essex-lane .....	.....	Backing kerb.	
Fort-street.....	Forming and gravelling.		
Fitzroy-street .....	Repairing & opening channels .....	Opening channels .....	Drain.
Francis-street .....	Opening channels .....		Repairs.
Forbes-street .....	.....	Repd. ballasting .....	Forming, &c., drain.
Gravel .....	2,076 tons excavated and screened .....	Excavating and screening 923 tons .....	
George-street.....	Repairing, and repairing drains and guttering .....	Excavation, metalled, paved, crossings, repairing .....	Pipe drains, repairing metal.
Goulburn-street....	Repairing and opening channels .....	Repairing .....	Repairing.
Gloucester-street .....	Repairing drain .....	Forming, repairing.....	Repairing.
George-street Market ..	Repairing footways.....	Roofing .....	Forming, repairing, urinals erected, pipe drains.
Gas-lane .....	.....	Ballasting, gravelling.	
Gipps-street .....	.....		Repairing.
Harrington-street .....	.....		Repairing.
Harris-street .....	Repairing .....	Opening channels .....	Forming, repairing.
Haymarket .....	Repairing .....	Alterations, &c., repairing road..	Repairing, new weigh-bridge.
Harbour-street .....	.....		Drain, repairing.
Hunter-street .....	.....	Repairing, backing kerb .....	Repairing.
Hay-street .....	.....		Repairing.
Hutchinson-street.....	.....	Repairing.	
Jamison-street .....	Repairing .....		Cutting down, repairing, gravel.
Jenkins-street .....	.....	Forming brick gutter.....	
Judge-street .....	.....		64½ rods formed.
Kent-street .....	Cutting down, quarrying {	Excavating; cutting down, quarrying, repairing, ballast, gravel, wall .....	Cutting down, quarrying, cutting down, gateway, forming, gravel, repairing, steps, drain.
King-street .....	Repairing .....	Excavated, metalled, paved, crossing, watering, repairs.....	Repairing.
Kensington-street.....	Repairing.		
Liverpool-street .....	Repairing, laying crossings..	Repairing, backing gutter .....	Drain, repairing crossing, metalling, gravelling, repairing.
Lime-street .....	Repairing .....	Repairing .....	Forming, ballasting.
Lane leading to Dowling-street.....	Repairing		
Miller's Point Road....	Repairing		
Market-street .....	Repairing grating shaft .....	Repairing .....	Repairing metal.
Market Wharf .....	Repairing crossings & drains .....		
Market-lane .....	Repairing & opening channels .....	Repairing .....	Repairing.
Macquarie-street .....	Forming, opening channels {	Paved crossing, paving in front of Mint, building drain and shaft .....	Forming, ballasting, repairing.
Macleay-street .....	Forming and gravelling.....	Opening channels .....	Forming, gravelling, repairing.
Margaret-street.....	Quarrying and forming.....	.....	Carting.

## STREET WORKS,—Continued.

	1854.	1855.	1856.
Margaret & Kent Sts. Margaret-place .....	Fencing at corner. Repairing footpaths .....	Repairs .....	Back kerb, steps, re- pair.
Metal .....	.....	Breaking 276 tons and stacking. Repairs.	.....
Middle-street.....	.....	.....	Repairing.
Miller's-road .....	.....	.....	Repairing.
Newtown-road .....	Repairing .....	Repairing .....	Carting rubbish.
Nichols-street .....	.....	Opening channels .....	.....
O'Connell-street ... {	Repairing drain and opening channels .....	Backing kerb, repairing crossing.	.....
Park-street .....	Opening channels .....	Repairing and opening channels.	Pipe drain and re- pairing.
Park-street Steps .....	.....	.....	Stone steps, posts.
Park, Hyde	.....	.....	.....
Park and Pitt Streets	Repairing gutter.	.....	.....
Pitt-street .....	Repairing, opening chan- nels .....	Fencing, cutting down, forming, repairing.....	Forming, repairing, backing kerb.
Parramatta-street .....	Repairing and re-metalling...	Repairing and metalling .....	Repairing.
Princes-street .....	Repairing, &c. ....	Gravelled, forming, backing kerb	Repairing.
Phillip-street .....	Repairing and backing kerb	Repairing and backing kerb .....	Ballasting.
Palmer-street .....	.....	Water channel, ballasting, opening channels, repairing .....	Repairing.
Pottinger-street .....	.....	.....	Repairing.
Pennant Hills Quarry	.....	.....	.....
Painting Street Names	.....	.....	.....
Queen's-place .....	Forming and repairing.	.....	.....
Road back of St. Mary's	Repairing .....	Opening channels.	.....
Riley-street .....	Building sewer, opening } channels .....	Forming, repairing.....	Drain.
Road, Lyons-terrace ...	.....	Repairing .....	.....
Road, St. James' .....	.....	Forming .....	Ballast, stone.
Sussex-street.....	Forming, gravelling, metal {	Forming, metalling, repairing, backing kerb, drain .....	Forming, metalling, backing kerb.
South Head Road.....	Repairing, making drains {	Cutting down, repairing, back- ing kerb .....	Guttering, forming, gravelling, repair- ing.
Spring-street .....	Repairing footways .....	Repairs.	.....
Swan-street .....	Forming .....	.....	Repairing.
Stephen-street .....	Repairing.	.....	.....
Stanley-street .....	.....	Opening channels, road crossing	Repairing.
Short-street .....	.....	.....	Guttering.
Slip-street .....	.....	.....	Repairing.
Tank Stream .....	.....	.....	.....
Victoria-street .....	Opening channels .....	Repairing, opening channels ... {	Forming, gravelling, repairing.
Victoria-lane .....	Opening channels .....	Opening channels .....	.....
Valentine's-lane .....	Repairing .....	.....	Repairing.
Union-lane .....	.....	.....	Repairing.
Union-street .....	.....	.....	Repairing.
Upper William-street ..	Repairing, opening channels	Repairing, opening channels .....	Repairing.
Upper Fort-street . ...	.....	Repairs.	.....
Ultimo Road.....	.....	.....	Filling in, &c.
William-street .....	Repairing and forming ... {	Excavating, ballasting, repair- ing, gravelling, stone steps, backing kerb .....	Forming, gravelling, repairing, forming footway.
William-street East ...	.....	.....	Forming, metalling, gravel, repairing, and drain.
Woolloomooloo-street ..	Forming, &c., rep. channels	Repairing, opening channels .....	Repairing.
Wylde-street.....	Opening channels.	.....	.....
Wynyard-street.....	Forming and gravelling.....	.....	Metalling.
Wynyard-square .....	Forming roadway.	.....	.....
Windmill-street .....	Repairing, guttering .....	.....	Forming, metalling, repairing.
Wilmott-street .....	.....	Repairs.	.....
Wilton-street .....	.....	Repairing .....	Repairing.
Wynyard-lane .....	.....	Cutting down, ballasting, metal- ling, carting for gutter .....	Grating.
Watering Streets ... ..	.....	Making wells, repairing pumps, watering with 8,328 tons.	.....
York-street .....	Forming, repairing.....	Repairing, opening channels.	.....
Yurong-street .....	.....	Opening channels.	.....

STREET WORKS,—Continued.

	1854.			1855.			1856.		
	Rough Guttering.	Kerbing.	Guttering.	Rough Guttering.	Kerbing.	Guttering.	Rough Guttering.	Kerbing.	Guttering.
	Lin. ft.	Lin. ft.	Sup. ft.	Lin. ft.	Lin. ft.	Sup. ft.	Lin. ft.	Lin. ft.	Sup. ft.
Abercrombie-place .....	...	255	765	...	...	...	...	...	...
Alfred-street .....	...	...	...	264	...	...	...	...	...
Argyle-street .....	...	...	...	...	...	...	...	33	132
Barrack and York-street...	...	130	210	...	...	...	...	...	...
Bridge-street .....	240	...	...	...	333	999	...	...	...
Bathurst-street .....	...	...	...	396	138	418	...	...	...
Bent-street .....	...	...	...	...	...	97	...	...	...
Botany-street (Surry Hills)	...	...	...	...	100	300	...	...	...
Cambridge-street .....	50	...	...	786	...	...	...	...	...
Castlereagh-street .....	...	...	...	45	...	280	...	...	...
Clarence-lane .....	...	...	...	315	...	...	...	...	...
Cleveland-street .....	...	...	...	70	...	...	...	...	...
Crown-street .....	...	...	...	75	...	...	1,514	...	272
Cumberland-street .....	...	...	...	156	961	3,339	...	...	...
Clarence-street .....	...	...	...	...	45	135	...	...	...
College-street .....	...	...	...	...	87	261	46	...	...
Crescent-street .....	...	...	...	227	...	...	...	...	...
Domain-terrace .....	...	...	...	465	...	...	...	...	...
Druitt-street .....	...	75	335	...	245	612	...	...	...
Dowling-street .....	...	...	...	...	...	...	2,925	...	510
Devonshire-street .....	...	...	...	...	...	...	...	...	...
Elizabeth-street .....	...	...	...	...	...	125	...	...	...
Essex-lane .....	...	...	...	...	221	525	...	...	...
Forbes-street .....	...	...	...	...	184	570	1,376	...	...
Fort-street .....	...	...	...	...	...	...	...	81	76½
Fort-street (upper) nil	...	...	...	...	...	...	...	...	...
George-street .....	...	...	...	...	120	573	...	...	35
George street Markets.....	...	...	...	...	...	...	...	...	2,985
Gloucester-street .....	...	...	...	1,371	...	...	...	...	...
Goulburn-street .....	...	...	...	...	101	315	...	...	...
Harrington-street.....	...	...	...	777	...	...	...	...	...
Hunter-street .....	...	...	...	...	105	453	...	...	...
Hutchinson-street .....	...	...	...	153	...	...	...	...	...
Judge-street.....	...	...	...	...	...	...	396	...	2,046
King-street .....	...	...	...	...	312	...	...	...	...
Liverpool-street.....	...	...	...	2,535	...	...	2,145	...	300
Margaret-place.....	...	...	...	291	...	...	...	...	...
Margaret-street .....	...	...	...	...	...	...	...	...	...
Macquarie-place .....	...	...	...	...	...	...	...	389	433
Miller's Road .....	...	...	...	252	...	...	...	...	...
Princes-street .....	105	2,122	6,366	40	874	2,979	...	...	...
Palmer-street .....	...	...	...	644	...	...	...	...	...
Park-street .....	...	...	...	...	...	1,066	435	...	...
Phillip-street .....	...	1,110	3,330	...	1,317	6,138	...	...	120
Pitt-street.....	...	...	...	...	506	1,285	644	...	...
Pitt-street (New).....	...	...	...	...	...	...	...	1,260	4,002
Stanley-street .....	...	...	...	51	...	...	...	...	...
South Head Road .....	...	2,850	8,550	...	1,576	4,728	...	...	...
Sussex-street .....	...	2,551	7,653	...	4,370	13,110	...	1,590	5,034
Union-lane .....	...	...	...	438	...	...	...	...	...
William-street .....	...	1,307	3,291	...	2,360	8,160	...	890	2,850
William-street East.....	...	...	...	...	...	...	2,980	...	...
Wynyard-lane .....	...	...	...	...	...	3,172	...	...	...
Wynyard-square .....	...	...	...	...	54	162	...	...	...
Wynyard-street .....	...	74	...	...	191	579	...	...	...
Wallis-lane .....	...	...	...	432	...	...	...	...	...
Wilmott-street.....	...	...	...	555	...	...	...	...	...
York-street .....	...	...	...	...	...	...	...	44½	136
Riley-lane .....	...	...	...	261	...	...	...	...	...
Riley-street .....	...	...	...	120	...	...	...	...	...
Kerbing laid where flagging has been supplied under Act .....	...	...	...	...	...	...	...	488	...
Do., do., re-dressed and laid	...	...	...	...	...	...	...	734	...
Do., do., between Markets, re-worked .....	...	...	...	...	...	...	...	38	...
	395	10,474	30,500	10,719	14,198	50,381	12,461	5,547	18,931

STREET WORKS,—*Continued*

Pavement laid under Act	...	...	...	...	...	...	...	Kerbing.	
								...25,523 feet sup.	
Do. George-street Markets	...	...	...	...	...	...	...	3,938	
Do. do. relaid	...	...	...	...	...	...	...	734	
Total flagging laid...							...	...	30,195

## TOTAL QUANTITIES.

Rough Guttering, Kerbing, and Guttering, laid during	1854	Rough Guttering, Lin. ft.	Kerbing, Lin. ft.	Guttering, Sup. ft.
Do. do. do.	1855	395	10,474	30,500
Do. do. do.	1856	10,719	14,198	50,381
Do. do. do.	1856	12,461	5,547	18,931
Total in 3 years ...	...	23,575	30,219	99,812

*ABSTRACT shewing total measurements of the undermentioned Works performed, from the accession to office of the City Commissioners in 1854, to the 31 October, 1856.*

Rough Guttering	...	...	...	...	23,575 feet lineal.
Dressed kerbing...	...	...	...	...	30,219 " "
Four-stone gutter	...	...	...	...	99,812 superficial feet.
Cutting down streets	{	rock	...	...	504,050 cubic feet.
		soil	...	...	345,776 " "
Formation of streets, filling in	...	...	...	...	412,985 " "
" footpaths	...	...	...	...	1,980,000 superficial feet.
Ballasting, roadways	...	...	...	...	27,226 tons.
Metalling "	...	...	...	...	10,097 "
Watering streets, 18,657,000 square yards	...	...	...	...	21,820 "
Consumption of gravel	...	...	...	...	25,062 "
Pipe drains, 12 inch	...	...	...	...	852 feet.
" 9 inch	...	...	...	...	764 "
Culverts	...	...	...	...	855 "
Masonry, in retaining walls, &c.	...	...	...	...	4,810 cubic feet.
Formation of Wharves	{	filling in	...	...	202,500 " "
		timber, piles 20,163 lineal feet, planking	...	...	15,256.
		iron	...	...	...
Markets, galvanised iron...	...	...	...	...	40,000 square feet.
" " spouting	...	...	...	...	6,480 lineal feet.
Dust removed from streets	...	...	...	...	96,505 loads.
Night soil	...	...	...	...	172,930 cubic feet.
Timber used in miscellaneous works,—Planking	3,600 run.,	Beams	700 feet.		
Plans and Sections of streets	...	...	...	...	31

Average extent of labor employed during 1856:—2 overseers, 20 laborers, 11 carts; employed in repairs, rough guttering, watering streets, &c.

## APPENDIX B.

CATALOGUE of Drawings in the Water Works Department of the City Engineer's Office.  
(Plans left by the late Corporation.)

Reference Mark on Drawing.	Name of City Engineer in Office at the time the Drawings were delivered over.	Description of Drawings.
B-1	Mr. Francis Clarke, City Surveyor.....	Survey of Sydney, by Shields.
B-2	Do.....	Plan (Lithographed) of Sydney, by Wells.
B-3	Do.....	Plan of proposed Water Works, by Langley.
B-4	Do.....	Plan of a reservoir for the Lachlan Swamp.
B-5	Do.....	Survey (Government) of the Lachlan Swamp.
B-6	Do.....	Section of tunnel.
B-7 }	Do.....	{ 2 sections, shewing difference of level between the Lachlan and Long Swamp.
B-7a }	Do.....	
B-8	Do.....	Section of stream from the Lachlan to Atkinson's.
B-9	Do.....	Do. do. from Atkinson's to Lord's Mill.
B-10	Do.....	Section from mouth of tunnel to Gordon's Mill.
B-11	Do.....	Section from Atkinson's to Waterloo Mill.

DRAWINGS

## DRAWINGS for the City Service.

Reference Mark on Drawing.	Name of City Engineer in office at the time the Drawings were prepared.	Description of Drawings.
A-1	Mr. W. B. Rider...	Fountain for Hyde Park.
A-2	Do. ...	Tank for Lachlan Swamp.
A-3	Do. ...	Fig Tree Bathing Place (Design for.)
A-5	Do. {	Plan for connecting beam and bugle piece for pipe laying.
A-6	Do. ...	Old drawing 6-inch pipe and branch.
A-7	Do. ...	Ditto 11-inch ditto.
A-8	Do. ...	Drawing 4, 6, 9, and 12-inch pipes.
A-9	Do. {	Tracing and plan of 4, 6, and 9-inch pipes, as used by London Water Works.
A-11	Do. {	Tracing of Sydney Water Pipes 4, 6, 9-inch conical joints.
A-10	Do. ...	Branch pipes 4, 6, 9, 12 inch.
A-12	Do. ...	Drawing of iron night-soil cart.
A-13	Do. ...	Drawing of water carts.
A-14	Do. ...	Two drawings of weigh-bridge. (Swan, Balmain)
A-15	Mr. E. Bell.....	Drawing of 4, 6, and 9-inch locks.
A-16, 16a, 16b	Do. ....	Three sheets of castings. (Contract No. 1.)
A-17	Do. ....	Cock (brass) as used at the Circular Quay.
A-18	Do. .... {	Mounted tracing of Well's Plan of Sydney, having levels of intersections of streets plotted from documents in Commissioners' Offices.
A-19	Mr. W. B. Rider...	Plan of Woolloomooloo, with levels plotted at the intersections of streets.
A-21	Do. ...	Tracing of a conical joint for water pipe.

## PLANS, Surveys, &amp;c., &amp;c., for the Reservoirs and Works at Botany.

Reference No. on Drawing.	Name of City Engineer in office at the time the Drawings were prepared.	Description of Drawing.
C-1	Mr. W. B. Rider...	Survey of ground reserved (original.)
C-2	Do. {	Copy on mounted cloth, shewing lines on which the sections were taken (1 chain to an inch scale.)
C-3	Do. ...	Original reduced plan of do ( $\frac{1}{2}$ inch to 1 chain.)
C-4	Do. {	Tracing on linen, of lower portion of reserve, shewing borings for sea embankments, and engine house.
C-5	Do. {	Small plan (4 chains) shewing properties taken at Botany.
C-6	Do. ...	Small plan of Botany country.
C-15, 15a, 15b, 15c, 15d, 15e	Do. ...	6 sheets of sections of part of reserve.
C-10	Mr Bell...	Cross sections near flour mill, by Mr. Wade.
C-11, 11a, 11b	Do. ...	Do. 3 sheets do. Mr. Canning.
C-12, 13, 14	Do. ...	3 sheets of cross sections for sea embankment.
C-9	Do. ...	Tracing on cloth of Botany reserve.
C-7	Do. {	Plan of the neighbourhood of Sydney (copied from a plan in Surveyor General's.)
C-8	Do. {	Enlarged plan of part of reserve near flour mill (scale 10 feet to an inch.)
C-16	Mr. W. B. Rider...	Section of line of proposed dam between reserves.
C-17	Do. ...	Original design of water works.
C-18	Do. {	Drawing of engines (as sent home) with specification.
C-19	Do. ...	Plan of arrangement of engines, &c.
C-20	Do. ...	Drawing of fencing at Botany.
C-21	Do. ...	Original design of stand pipe (Mr. Mais, Del.)
C-22	Do. ...	Elevation of engine buildings and stand pipe.
C-23, 23a, 23b, 23c, 23d, 23e	Do. ...	Drawings Nos. 1, 2, 3, 4, 5, 6, stand pipe.
C-24, 24a, 24b, 24c, 24d, 24e, 24f, 24g, 24h, 24i, 24k	Do. {	Do. Nos. 1 to 10 inclusive, and 3a of contract No. 3.
C-25, 26, 26a	Do. ...	3 unfinished drawings of 30 inch waterlocks.
C-18a	Do. ...	An old drawing for the engines.
C-27	Do. ...	Sketch plan of proposed works at Botany.

PLANS



## PLANS, &amp;c.—Continued.

Reference No. on Drawing.	Name of City Engineer in office at the time the Drawings were prepared.	Description of Drawings.
C-28	Mr. E. Bell.....	Base casting for stand pipe.
C-30	Do. ....	first design for stand pipe.
C-31, 31a, 31b,	Do. ....	3 drawings of chimney for engine house.
C-32, 32a, 32b, 32c,	Do. ....	6 sheets of tracings of stand pipe (last design.)
32d, 32e		
C-33, 33a, 33b, 33c,	Do. ....	7 do. on cloth of do.
33d, 33e, 33f		
C-34	Do. ....	Air vessel for pumping engine.
C-35, 35a, 35b	Do. ....	3 sheets of permanent sections for pipe laying.
C-36, 36a, 36b	Do. ....	3 tracings on cloth of contract No. 4 (pipe laying.)
C-37, 37a, 37b, 37c,	Do. ....	6 sheets of tracings of sections over site of reservoir.
37d, 37e		
C-38, 38a	Do. ....	2 detail drawings for contract No. 4 (pipe laying.)
C-39, 39a	Do. ....	{ 2 drawings of brass sluice, to be used for gauging
C-40, 40a, 40b, 40c,	Do. ....	water running to waste at Botany.
40d, 40e		
C-41	Do. ....	Details of stand pipe (6 sheets.)
C-42, 42a		Plan of piling for corner of Botany reservoir.
C-43, 43a, 34b, 43c		2 drawings (sluice for reservoirs.)
		4 detail drawings of reservoir.

## DRAWINGS and Plans connected with the City Reservoirs.

Reference Mark on Drawing.	Name of City Engineer in office at the time the Drawings were prepared.	Description of Drawings.
E-11 11a	Mr. Bell.....	{ Sections over sill of low level reservoir, Crown-street.
E-12	Do. ....	Survey of do., do.
E-13	Do. ....	24 inch lock.
E-14	Do. ....	18 inch do.
E-15	Do. ....	Drawing of gearing for water locks.
E-16	Do. ....	Details of pipes, for delivery to reservoir, &c.
E-17	Do. ....	„ of Tank (Mr. Clunie.)
E-18	Do. ....	Section and drawing of high level reservoir.
E-19	Do. ....	Cross sections.
E-20	Do. ....	Drawing of Tank for low level reservoir.
E-21	Do. ....	{ Plan of arrangement of delivery pipe to Crown-street reservoir.
E-22	Do. ....	Block plan for Crown-street reservoir.
E-23	Do. ....	Details of ironwork for do.
E-24	Do. ....	„ of drawings for reservoir.

## DRAWINGS for Main for conducting Water from the works at Botany to Sydney.

Reference Mark on Drawing.	Name of City Engineer in office at the time the Drawings were made.	Description of Drawings.
D-1	Mr. Bell.....	{ Junction casting for bottom of Crown-street, 2-30 inch pipes.
D-2	Do. ....	{ Drawing of 30 inch main.
D-3	Do. ....	{ Trial section over a line from half-way house, to a point near Waterloo Retreat.
D-4	Do. ....	{ Trial section over straight line from Botany to Sydney.
D-5	Do. ....	{ Trial section along portion of Botany Road to Crown-street.
D-6	Do. ....	{ Trial section from Botany to Crown-street.
D-7	Do. ....	{ Trial section from Botany to Chippendale, over turnpike road.
D-8	Do. ....	{ Section from Botany Bay to Hollingshed's.
D-9	Mr. Rider & Mr. Bell	{ Survey along the Botany Road to Chippendale.
D-10	Mr. Bell.....	{ Plan and section of line adopted for 30 in. main.
D-11	Do. ....	{ Drawing of Contract No. 7—30, 20, and 12 inch pipes.

City Commission,  
Engineer's Department,  
17 November, 1856.  
182—P

W. HOOPER,  
Assistant Engineer.  
DRAWINGS

Marked R A-1, 2, 3, 4, &amp;c.

DRAWINGS for Contract No. 1, made previous to 12 February, 1856, and approved of by Commissioners.

No.	Date of adoption by Commissioners.
1. Longitudinal section, Main Sewer .....	8 June, 1855.
2. Longitudinal section, Bridge-street Sewer .....	Do.
3. Longitudinal section, Macquarie-street Sewer .....	Do.
4. Longitudinal section, Pitt-street .....	Do.
5. Longitudinal section, Castlereagh-street .....	Do.
6. Longitudinal section, Elizabeth-street .....	Do.
7. Longitudinal section, Phillip-street .....	Do.
8. Detailed cross and longitudinal sections of 6 ft., 4 ft. 6 in., 3 ft. 6 in., and 3 ft. sewers, submitted with City Engineer's Report, 29 December, 1855.	
9. Detailed drawing, junction of Pitt and King Streets .....	January, 1856.
10. Do. junction of Pitt and Hunter Streets .....	Do.
11. Do. junction of sewers, with 30 ft. radius for cross streets .....	Do.
12. Detailed drawings of syphon and junctions .....	29 June, 1855.
13. Do. of gully grates .....	Do.
14. Do. of gully .....	Do.

Marked R, 1, 2, 3, &amp;c.

DRAWINGS in Office previous to 12 February, 1856.

	Date.
1. Trial sections of Pitt, Hunter, King, George and Bridge Streets, 6 sheets.....	December, 1854.
2. Longitudinal sections of cross streets, 11 sheets .....	June to Oct., 1855.
3. Full size section roof of sewer .....	December, 1854.
4. Plan of centering and moulds .....	March 19, 1855.
5. Plan of manhole frames.....	August 26, 1855.
6. Cast-iron sewer, Fort Macquarie .....	November 2, 1855.
7. Plan of position of Main Sewer at Police Office .....	August 10, 1855.
8. Drawings of junctions, double, 3 ft. by 4 ft. 6 in. ....	September, 1855.
9. Do. do. single, 3 ft. by 4 ft. 6 in. into 6 ft. sewer...	Do.
10. Do. do. King and Pitt Streets, 3 ft. with 4ft. 6in.	Do.
11. Do. do. King and Pitt Streets, 3 ft. with 4 ft. 6in.	Do.
12. Do. do. 3 ft. with 3 ft. 6 in. ....	Do.
13. Do. do. 3 ft. 6 in. with Main Sewer .....	Do.
14. Plan and section of Wynyard-lane drain .....	Do.
15. Copy of ditto on cloth .....	Do.
16. Plan of Fort Macquarie .....	Do.
17. Sewer in soil, cross section .....	June, 1855.
18. Longitudinal sections of Woolloomooloo-street, 30 sheets .....	Do.

DRAWINGS

Marked C, 1, 2, 3, &c.

DRAWINGS made since 12 February, 1856.

	If approved by Commissioners.	Date.
1. Details of junction of 3½ feet sewer and main .....	Approved.	29 February, 1856.
2. Large plan of main and portions of sub-mains .....	.....	April, 1856.
3. Rough copy of ditto.		
4. Three tracings from ditto.		
5. One large tracing from ditto.		
6. One plan for contractor of ditto.		
7. Tracing from contractor's drawing.		
8. Two detailed drawings of plans and sections at Fort Macquarie .....		April, 1856.
9. Longitudinal section of outlet at ditto.		
10. Details of cast-iron outlet and valve at Fort Macquarie.		
11. Sections of cast-iron outlet at Fort.		
12. Details of casting for intercepting sewage.....	Adopted.	15 August, 1856.
13. Details of brass orifice and valve .....	do.	"
14. Plan and section for contract of outlet to main sewer	do.	"
15. Two sheets of cross section of ditto .....	do.	"
16. One ditto with details of tank .....	do.	"
17. Working drawing, termination of outlet .....		3 October, 1856.
18. Longitudinal sections of 22 cross and main streets in section No. 1, and additional districts. (11 sheets.)		April & May, 1856.
19. General plan of sewerage contract No. 1, shewing cross streets and additional districts .....		24 May, 1856.
And two copies of ditto.		
20. Details of cast-iron crossing for Tank Stream, Bridge-street .....		28 May, 1856.
21. Details of ditto for Hunter-street .....		"
22. Copies, plans, and sections, Circular Quay and Tank Stream. (2 sheets) .....		May, 1856.
23. Copies, plans, and sections of Pitt-street North .....		July, 1856.
24. Details of chase for main tunnel (3 drawings) .....		June, 1856.
25. Detailed cross-section, Castlereagh-street sewer and open cutting .....		18 July, 1856.
26. Contract plan and section of back drainage, Phillip-lane .....	Approved.	9 July, 1856.
27. Details of ditto .....	do.	"
28. Copy of ditto, on cloth .....	do.	"
29. Details of Macquarie-street manhole .....		26 August, 1856.
30. Covering for main sewer.....		4 August, 1856.
31. Macquarie-street junction with main sewer .....		1 September, 1856.
32. Large tracings, on cloth, of two divisions of survey, with works shown where executed.		
33. Drawing for diverting Tank Stream and drainage for Lower Pitt-street .....		October, 1856.

Marked R, B-1, 2, 3, 4, &c.

DUPLICATES of adopted Sections made prior to 12 February, with additional details drawn upon them since that date, showing progress of works, &c.

	Date.
1. Duplicates of longitudinal section, main sewer .....	2 July, 1855.
2. " " Bridge-street sewer .....	"
3. " " Macquarie-street do. ....	"
4. " " Pitt-street do. ....	"
5. " " Castlereagh-street do. ....	"
6. " " Elizabeth-street do. ....	"
7. " " Phillip-street do. ....	"

## APPENDIX C.

RETURN of all *New Mains* laid down in the year 1856, with their sizes and localities.

	Pipes.	Yards.
<i>9-inch Pipes.</i>		
George-street South and Parramatta-street.....	112	340
William, Yurong, Stanley, and College Streets.....	370	1,176
<i>6-inch Pipes.</i>		
Botany and Kensington-streets .....	148	441
Parramatta-street, from Kensington-street to Sugar Works .....	178	534
Bank-street .....	89	272
Francis-street, from College to Charles Streets .....	30	98
Charles-street, from Francis to Liverpool Streets .....	38	116
Liverpool-street, from Charles to Palmer Streets .....	120	371
<i>4 inches.</i>		
Parramatta-street and Newtown Road, from the Sugar Works to Mrs. Shepherd's .....	91	270
Parramatta-street, north side to City Boundary .....	38	112
Abercrombie-street .....	34	102
Athlone-place .....	102	312
Botany-street, from Bank to Cleveland Streets .....	43	130
Francis-street, from Charles to Yurong Streets .....	26	82
Bourke-street, south of William-street .....	56	170
Palmer-street, from Liverpool to William Streets .....	120	365
Stanley-street, from Palmer to Bourke Streets .....	30	93
Wellington-street, Chippendale .....	62	188
Circular Quay, extension of Macquarie-place Main .....	37	112
<i>3-inch Pipes.</i>		
Elizabeth-street, south of Campbell-street.....	57	167
James-street, from Bathurst to Washington-streets .....	20	66
Circular Quay, main for supplying shipping .....	220	645
N.B.—A number of branch, lock, and plug pieces have been used in laying these mains.		

*Lowering and Repairing Mains.*

A portion of Kent-street, between King and Erskine-streets, has been lowered, on account of the street having been cut down by the Commissioners.

Pitt-street South, from Carter's Barracks to the Old Watch-house, has also been lowered, the street having been worn away.

Erskine-street, from Sussex to Union-street, has been taken up and relaid, on account of the old pipe being very much corroded.

A good many pipes of different sizes have been used for repairing mains, damaged by operations in the streets by the Sewerage Contractors, &c., &c.

The portions of Bourke, Palmer, and Crown Streets, between William and Woolloomooloo Streets, are to have pipes laid down, and 225 4-inch pipes have been carted to them for that purpose, and commencement has been made in Bourke-street.

FRIDAY, 28 NOVEMBER, 1856.

Present:—

MR. GORDON,  
MR. JONES,  
MR. PLUNKETT,MR. ROBERTSON,  
MR. SCOTT.

R. JONES, ESQUIRE, IN THE CHAIR.

John Rae, Esquire, called in and further examined:—

1. *By the Chairman*: I think you stated, in reply to a question by one of the members of the Committee, that in January last you directed your Engineer, and other persons employed by you, to make separate Reports as to the amount of work done; while in October no such separate Reports were called for;—upon what grounds did you make a distinction between the January measurement and that which took place in October? I explained in my former examinations, in answer to Mr. Scott's questions, that at the quarterly measurement for September there was a large balance in hand, £16,000 and upwards, and that the percentage upon this was not paid because we wished to have a very correct measurement of the whole of the works at this period; and on the 17th October, 1855, we instructed our Engineer to make a personal measurement of all the works, and to call in the assistance of Mr. Hooper, and such other assistance as he might require, to give us a perfect measurement of the whole of the works performed up to that time. I also stated, that in consequence of our officers being called so much from their duties to attend the late Committee, this measurement was not completed for some months after it was commenced. I find that Mr. Darvall, on the 20th November, in his evidence, states, "The quarterly measurements were made some time since; the calculations are hardly completed yet."

John Rae,  
Esq.  
28 Nov., 1856.

2. That is with reference to the September measurements? Yes. Then, as it was so near the end of the year, we thought it advisable to include the whole in the quarterly measurement at December—in fact to make it a half-yearly measurement; and it was upon that half-yearly measurement we presumed we had to pay, and not upon the quarterly measurement of September at all. I need hardly state to the Committee, that if the contractor fail to send in a quarterly measurement he does so at his own loss—it would merely prevent him getting his ten per cent; that is the only effect it would have.

3. Did I not understand you to say, that in January you took steps in reference to quarterly measurements which had not been taken in October? Yes; as the quarterly measurement for September was thrown into December, we deemed it advisable to take every precaution to make out a most perfect measurement.

4. *By Mr. Scott*: Who was the Engineer at the time? Mr. Rider.

5. *By the Chairman*: Will you explain what additional precautions you took in January, as compared with October, and why you took them? The additional precaution we took in December was to call in the assistance of a Mining Engineer, not at all connected with the Commission, for the purpose of arriving at an understanding upon the disputed question of rock and soil, which had been agitated before the Select Committee of last year. In consequence of the doubts which had been thrown upon the subject out of doors we deemed it advisable, for our own protection, as well as for the protection of the citizens, to call in this additional assistance, and upon the Report furnished by Mr. Plews, the party before alluded to, we deemed it necessary to open a communication with Mr. Randle, for the purpose of settling this point. The correspondence is here. (*The Witness produced the same.*)

The substance is this. After some correspondence between the Commissioners and Mr. Randle, we succeeded in making a compromise—I presume that is the name you would call it—with Mr. Randle. In Castlereagh and Pitt streets, south of Market-street, tunnelling was charged and certified by our Engineers as through rock; this was arranged to be charged as two-thirds rock and one-third soil, by which we effected a saving of £1,088 9s. 6d. on the charges certified by our Engineer.

6. Made by Mr. Randle, and certified by your Engineer? Yes, certified by all our staff. Mr. Hooper qualified his certificate to some extent.

7. On what principle was this deduction made—what was the soil charged as rock, respecting which this reduction was made? These are the terms of the compromise:—

"Elizabeth-street is to remain as it is now charged in my bill to the 31st December last.

"Castlereagh-street—as far as the tunnelling is done south of Market-street, to be considered as passing through two-thirds rock, and one third soil.

"Pitt-street.—The same as Castlereagh-street, excepting 310 feet lineal next to, and south of, Market-street."

The letter was accompanied with the professional opinion of Mr. C. J. Hodgson, consulting Chemist and Mineral Surveyor, corroborating Mr. Randle's view of the propriety of charging for the strata as through rock. This letter of Mr. Randle, dated 15th January, and the conditions contained in it, we accepted on the 17th. The reason which prevailed with us in not insisting upon considering it half soil and half rock, was one which, I think, would be satisfactory to the Committee. Mr. Randle never has allowed, and does not now admit, that it is not all rock, but he says, even assuming our principle to be correct, that it is part soil and part rock, the lower portion of the sewer comes in the harder part of the strata, which would make more than three parts of rock to one of soil. Under these circumstances we consented to these terms; indeed we were not in a position to help ourselves, as had he gone to law he could have relied upon the certificates of our Engineers.

8. Under the circumstances you think you made the best arrangement practicable? Yes. I will append a Schedule shewing the particulars of the compromise. (*Vide Appendix A.*)

9.

John Rae,  
Esq.

28 Nov., 1856.

9. What led you to doubt the accuracy of your Engineer's certificates with regard to the character of the soil through which the tunnelling was carried? I think it was the discussion out of doors.
10. That was the cause that led to the re-consideration of the question and re-examination? Yes; but we always intended to take a very complete measurement at the end of every quarter before payment was made. This was our intention before the Committee were sitting at all.
11. Then I understand you to say, that after this correspondence and re-examination had taken place, you felt yourselves called upon to dispense with Mr. Rider's services? Yes; that was one great cause, and the other was the confusion into which he had allowed his office arrangements to fall.
12. You thought the erroneous certificates, which you were satisfied he had given, justified you in withdrawing your confidence from him? The different sorts of errors made were certainly one of the causes that led to his dismissal; another was the state in which he allowed his office to fall. Besides, he absented himself almost entirely from the office, for about a week before his dismissal.
13. I think I understood you to say, that you objected to Mr Randle tunnelling in portions of Macquarie-place? Yes.
14. And he said he was tunnelling for his own convenience? Not Mr. Randle; it was the Engineer with whom we had communication.
15. He stated that Mr. Randle was tunnelling for his own convenience, and would only charge for the work as open cutting? Yes. There is a portion charged as open cutting, but neither Mr. Darvall nor myself specified any length. It merely struck me, on seeing the work going on, that it would be better to have open cutting than tunnelling there; but I did not know at the time, nor was anything stated, about the distance. My impression is, that only a small portion was certified for open cutting, and the majority for tunnelling.
16. Do you think as much was charged for open cutting only as ought to have been so charged? My impression was, that there would have been more open cutting charged there.
17. A portion of the work which Mr. Randle executed by tunnelling should have been charged to the Commissioners as open cutting? I think more was certified to as tunnelling through rock than properly should have been so charged, after our understanding with the Engineer.
18. Will you be kind enough to refer to pages 141, 142, and 143 of the Final Report of the Committee of last Session. I may say that I will confine my remarks to the Macquarie-street sewer, for the purpose of simplifying the matter. I will direct your attention to the Macquarie-street works, as charged for on the 25th of October, and certified to at the bottom of page 141, and then turn over to page 143, and compare the charges made on the 25th of October with those made on the 8th of November. These are certified to in both cases, as I understand, by your Engineers, as works which up to those respective dates had been executed. In the certificate of the 25th of October, you will find there are "2,903 superficial feet driving in rock," at a cost of £11,612, while on the 8th of November the quantity charged for is 2,727, and the amount is only £10,908—can you account for this smaller quantity being charged a fortnight later than the larger quantity? The manner in which it was accounted for to us by the party who made the error, Mr. Mais, and also his explanation to the Committee of last year, was simply this,—that on the 13th of September, when that quantity first appears, Mr. Mais, instead of measuring the quantity of tunnelling from the tunnel itself, which he ought to have done, measured it from the section which was adopted by us the 8th June, 1855, and shows in figures the length of 2,903 feet. He measured it from the section, not taking into consideration at the time that a portion of the work was uncompleted. I may state that it was Mr. Mais' practice, as far as we can gather from him, when any portion of work was completed, merely to repeat it, and carry it on from time to time till the quarterly measurement, unless it was discovered—which it was on the 8th November—that there was a portion of the work not completed. That was the only explanation we ever got, and I believe the explanation is sufficient to account for the error, though not to excuse it in any shape.
19. If you turn to page 138, you will find this larger amount for driving in rock was charged on the 13th of September? Yes; it went on gradually to the 13th September, when he fancied it was completed, and from that time till the 8th November it appears the same quantity. I am fully satisfied that the alteration on the 8th of November arose in consequence of our letter to the Engineer to go into a personal examination of the works; for you will find that, in his evidence on the 13th November, only a few days after the rectification of this error, Mr. Rider states, when accounting for it, "I had not made the measurements of the work myself until lately." "I speak from personal inspection and admeasurement," using the words we had ourselves employed in our letter to him.
20. The Commissioners still held themselves bound to pay on the certificates furnished by Mr. Mais fortnightly? Those furnished by Mr. Mais, and certified by Mr. Rider.
21. So that they were liable to pay, and probably did pay, on account of this driving in rock, ninety per cent. of £11,612 on the 13th of September, while they were entitled to pay on the 8th of November only ninety per cent. upon £10,908? I do not look at it exactly in that light. Our payments were not at all upon separate items. We have guarded ourselves from the first against making a single payment to Mr. Randle upon quantities. At this time, the 8th of November, the work actually done, not in Macquarie-street alone, but upon the sewers generally, amounted to £75,241 2s. 11d., upon which Mr. Randle had received £68,683 19s. 1d., leaving a balance in hand, after paying the reduced amount of £6,557 3s. 10d.
22. That amount would have been in excess of what you were required to pay on your contract, which was ninety per cent. upon the work executed? Yes; but this was the second quarter; we would not pay the ten per cent. upon the previous quarter in full, for the reason I have stated.

23. Supposing this measurement were included in the September quarterly payment, he would then have been entitled to have been paid in full; you only kept ten per cent. from the time the work was measured until the next quarterly measurement? Yes; and we thought £6,000 or £7,000 was sufficient to keep in hand to meet all possible mistakes.

John Rae,  
Esq.

28 Nov., 1856.

24. I will also call your attention to the item for brickwork, which, on the 25th of October, is charged 131 rods 94 feet, at a cost of £5,514 18s., while on the 8th of November it is charged at 100 rods 79 feet, at a cost of £4,210 17s., making a difference on the latter date of £1,304 1s. less than on the prior—How do you account for this error? The only way we can account for this error is by supposing that Mr. Mais calculated the brickwork as fourteen-inch instead of nine-inch, for a considerable portion of the work. You will find in the certificate book, where these items occur, so much put down as fourteen-inch and so much as nine-inch. On the 8th of November you will find that the fourteen-inch work is very much diminished, and of course the nine-inch has much increased. That goes on till the 31st December, when you will find that the nine-inch is still increasing. It was only discovered by degrees that this was nine instead of fourteen-inch work; and at the last measurement of Mr. Bell we discovered that it was all nine-inch work, with the exception of the shafts. We have now brought it down to the smallest possible quantity.

25. *By Mr. Scott* Mr. Rider certified that it was fourteen-inch work? Yes, and so did Mr. Mais. It is down in the book regularly as fourteen and nine-inch work.

26. *By the Chairman*: This error arises from the brickwork in Macquarie-street having been all, or nearly all, charged as fourteen-inch, when, in point of fact, it was nine-inch? Yes, a large portion of it. I have compared it with the field-book of Mr. Mais—which, by-the-by, I may say is perfectly at your disposal, if you wish to see it. We did not know till the Report of the Select Committee came out that it was so much asked for, and I think it was one of the most injudicious things that Mr. Mais did, either for himself or us, to refuse to give it up.

27. Do you not think the charging of this brickwork time after time as fourteen-inch, when it was only nine-inch, proves that the Engineer must have been grossly careless in making his measurements? I believe so, unquestionably.

28. *By Mr. Plunkett*: How could such a thing occur either from carelessness or negligence time after time? It is impossible for us to account for it; we can only explain it.

29. When did you satisfy yourselves of these inaccuracies? The first occasion when we discovered it, was the measurement of 8th of November. I think instead of 131 rods of brickwork it was then only 100, and we discovered that the error arose from the larger quantity having been charged as fourteen-inch.

30. *By the Chairman*: Making a diminution in the amount of £1,304 1s.? Yes.

31. *By Mr. Plunkett*: Subsequently you discovered that the whole of the brickwork, with the exception of the shafts, was misrepresented? When our attention was drawn to it, we gave instructions to the Engineer to make a more stringent examination, and Mr. Bell also examined it, bit by bit, until it was found that there was no fourteen-inch work with the exception of the shafts.

32. *By the Chairman*: Is the whole of the brickwork in Macquarie-street now completed? Yes.

33. What is the total charge, as correctly ascertained by Mr. Bell, up to this time? I find that, on the 30th of June last, the extreme reduction is 85 rods 44 feet, making a total charge of £3,576 15s. 10d. for the whole of the brickwork.

34. You believe that sum includes the charge for the whole of the brickwork complete? Yes, I believe it does, with the exception of 2 rods 18½ feet done in October. This shows exactly the whole of the brickwork in Macquarie-street (*referring to a plan*). It is all nine-inch, with the exception of the shafts.

35. *By Mr. Plunkett*: Did you make any calculation as to the difference between what was really nine-inch brickwork, and what was certified as fourteen-inch? The highest charge for brickwork was £5,514 18s., and the lowest was £3,576 15s. 10d.

36. *By the Chairman*: I find you state that the amount chargeable for the whole of the brickwork in Macquarie-street, up to June last, was £3,576 15s. 10d? Yes.

37. And the charge certified to you by the Engineer on the 25th October last was £5,514 18s., so that, in point of fact, you find that your Engineer, in October last, certified for an amount of brickwork in excess of what had actually been completed, up to June last, of £1,938 2s. 2d? Yes; the difference, as far as we can ascertain, arising from having charged fourteen-inch brickwork where there was only nine.

38. *By Mr. Plunkett*: How were these certificates given to you? They were handed in fortnightly, certified by the Engineer and his assistant, Mr. Mais, who was understood to measure them.

39. As it is evident there must have been collusion between some of the parties, I want to see who the parties were—An account was sent in which they certified upon, or whether the certificates were separate from each other? These memoranda—for we guarded against paying upon certificates, upon the ground that if we paid upon them Mr. Randle would have a legal claim upon us for the whole amount certified. These memoranda were given as a guide to us in making our fortnightly payments.

40. You do not understand my question—my question was as to the form in which the certificates were sent in? This is the form of the certificate or memorandum sent in to us by our Engineer. (*The witness handed in the same.*)

41. Not by the contractor? Not by the contractor; the contractor is not bound to furnish a fortnightly measurement at all.

42. How did the contractor furnish his account of his charges? At this time he did not furnish weekly or daily ones. Mr. Randle's people and our Engineer, I believe, measured together—that is to say, they took their separate measurements, and they must have agreed before the contractor received his money that the quantities were correct. But since Mr.

Bell

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Bell has come here they do not measure together; we think it a better check that they should measure separately.

43. With reference to this account for brickwork, dated 25th October? This was sent in to us with a certificate signed by Mr. Rider and Mr. Mais.

44. Was there any signature on the part of Mr. Randle, the contractor? No; the signature we get from him is for a sum on account, without any particulars.

45. Have you any of these old certificates? We have all of them; every one as it comes in is kept in a book, so that it shall be safe from alteration.

46. *By the Chairman:* Have you reason to believe that between the date of this certificate, the 25th October, and Mr. Bell's certificate of June last, there was any additional brickwork executed in Macquarie-street? Not a bit. I find that the 100 rods to which it was reduced on the 8th of November is continued on the 6th of December, and is reduced again on the 31st. I presume that there was no more done during that time. I am not aware of any.

47. Your present impression is, that, at this time, the brickwork in Macquarie-street is completed? That is my impression; but the Engineer will be able to tell you exactly.

48. *By Mr. Scott:* This excess in the item of brickwork of £1,900 odd, was shewn by Mr. Bell's admeasurement, was it not? The ultimate correction was made by him, but you will find by Mr. Rider's own admeasurement of the 31st December, which is our first great quarterly measurement, that it is reduced to 95 rods. Mr. Bell's measurement in March, I think, was 91.

49. What was his measurement in June? He reduced it again to 85; but the December measurement should be taken as the starting point to compare with Mr. Bell's.

50. *By the Chairman:* In the meantime, you would be paying on these quarterly measurements in the aggregate? Yes.

51. Allow me to call your attention to the junctions. On the 25th October, I find 480 junctions charged for at a cost of £312; on the 8th November, I find there are 464 junctions charged for at a cost of £162 8s., shewing a difference in the cost less at the latter than at the former of £149 12s.—how do you account for that? I have stated that I can account for it in no other way than as a clerical error. I cannot see how it can be accounted for otherwise.

52. I would ask you to add up the total charge for Macquarie-street, certified to up to the 25th of October, and then to add up the total charge to the 8th November? On the 25th of October it is £18,703 15s., and on the 8th November £16,592 18s. 9d.

53. Subtracting the amount of the latter charge from the amount of the former, what do you make the difference to be? £2,110 16s. 3d.

54. So that, in point of fact, your Engineers have certified that work in Macquarie-street had been executed on the 25th of October to the amount of £18,703 15s., while on the 8th of November, they certified that the work executed to that date amounted only to £16,592 18s. 9d., the previous certificate being in excess of the latter £2,110 16s. 3d? Yes.

55. So that, in fact, if you had paid on the certificate of the 25th of October, ninety per cent, as you were required to do by the terms of the contract, you would really have paid a larger amount than was payable for the whole work executed up to the 8th of November, a fortnight later? If we had paid in that way, but we never did. We paid upon the total work executed.

56. Your contractor could have called upon you to pay to him on the 25th of October 90 per cent. upon the work done? Yes.

57. Supposing he had done so, you would have paid to him a larger sum than would have been chargeable upon the whole of the work a fortnight later? Yes. I presume, very little was done.

58. Supposing nothing had been done, you would still have paid in excess? Yes; if we had paid in full.

59. Bearing this in mind, do you not think if the terms of the contract as given in page 13 of the report in regard to the contractor sending in a weekly statement of the work in hand, and a daily statement of the work done had been complied with, these errors could scarcely have taken place? I cannot see how it would have prevented it. On my last examination I shewed you one of these weekly certificates, and I do not see how it would have been possible, however much we might have compared these accounts, to have discovered where the discrepancy arose. These fortnightly certificates were generally made up to the day before the payment day, and were handed to us with all the other accounts. Even if we had been competent to have gone into all these measurements we could not have gone on with our other work, but we conceived that we were doing our duty to the public to throw the responsibility of the fortnightly payments upon the Engineer and his assistants, and when we had to pay up the ten per cent. at the quarterly measurement to take every means in our power to guard against incorrect measurements and over payment.

60. Supposing in other streets the same error had occurred as evidently occurred in Macquarie-street, you would have found at the end of the quarter instead of having ten per cent. in hand, you would have paid ten per cent. in advance of the whole account? If errors to that extent had occurred.

61. So that instead of having ten per cent. left to correct any errors that might have been made in the quarter, you would have been ten per cent. in arrear? Yes; if such errors had been made and we had paid in full.

62. *By Mr. Plunkett:* When did your quarters commence? The quarters were September, December, March, and June; the regular quarters of the year.

63. *By the Chairman:* Although you could not be expected to check the professional measurements of your Engineer, do you not think, as Commissioners who had charge of the public funds, you were bound, either yourselves or by your accountant, to test the comparative accuracy and correctness of these quarterly measurements sent in by your Engineer. For instance



instance, to ascertain whether the amounts charged for Macquarie, or any other street—indeed for all the streets in which work was going on,—were relatively correct as between one fortnight as another. Could you not have added up the charge for Macquarie-street on the 25th of October, and the charge for the same street on the 8th of November, and do you not think you were bound to do so? Of course, when it came before us, we discovered this; but up to the 25th October, there was nothing to draw our attention to the fact that these were incorrect measurements.

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64. Did you each fortnight, before making a payment, either yourself or by your Accountants, get the amounts added up for each street to see that the sums paid for works in each particular street corresponded as between one fortnight and another? We got them done by the officers whose duty we thought it was, the Engineer and his Accountant, and assistants.

65. You did not get the Accountant to add up the amounts certified to for each street each fortnight? The Treasurer or the Accountant, in the Engineer's office, run out the sums. That is the constant habit in our office with contract accounts.

66. Suppose he had run out these amounts for Macquarie-street on the 25th of October, and again on the 8th of November? He would have been called upon to do that merely to test the accuracy of the calculation, as he does in other accounts.

67. He confined himself to seeing that the additions in each certificate were correct? I am stating what is the usual practice in all other contract accounts; but whether it was done by the Treasurer or by the Accountant, I am not sure; I think it was by the latter. We considered that we were paying lump sums on account, and if we got something near the amount, we would be safe to keep some thousands in hand to cover any errors that might be discovered.

68. Then you did not from fortnight to fortnight add up and compare your respective payments on account of works in each street? Not always, as far as I myself was concerned, but frequently; I cannot say what my brother Commissioners did. I had a great deal of work to do besides this.

69. Have you any farther statement to make to the Committee? With reference to the questions you have been asking, I think it right to state, that although we could not prevent our officers from making a false or erroneous measurement, we took every means in our power to discover these errors; and when they were discovered, to prevent any loss to the City in consequence. I may just state the sums we had in hand at different periods to guard against these errors. For instance, on the 25th of September, we had £16,183 9s. 5d.; on the 8th of November, £6,557 3s. 10d.; on the 31st December, after the compromise, £7,679 16s.; on the 31st March, 1856, £2,582 9s. 4d., besides a portion for rendering which had been done, but not completed. The Engineer offered fourpence a foot upon it, but Mr. Randle refused it; consequently, we kept back the whole, £1,504 11s. 2d. At the quarterly measurement in June last we had in hand £2,936 18s. 1d.; on 30th September last, £6,071 12s. 11d.; and at the present time, £4,076 18s. 7s. So that after the whole of these errors have been discovered and rectified, which I believe they now are to the letter, there is a sum in hand, as there always has been, to cover any deficiency. Therefore, ultimately there can be no loss. (*The witness handed in a statement shewing the amount of work done each fortnight, the sums advanced, and the per centage retained. Vide Appendix B.*)

70. *By Mr. Plunkett*: Do I understand that on the work certified to be fourteen-inch brickwork, and which turns out to be only nine-inch, there is no over-payment? There has never been an over-payment. There has never been within two or three thousand pounds of the whole amount paid up.

71. How is that, when these false certificates have been going on for so long a time—how are you satisfied that there has been no over-payment upon these false certificates? Simply because we refused to pay up the ten per cent. at the quarterly payments.

72. *By Mr. Scott*: Mr. Randle, that is the contractor, I suppose, had parties to certify to his work? Yes; I presume so.

73. Are you aware whether he himself examined this work,—I am now speaking of the fourteen-inch brickwork? I do not know of my own knowledge. We never had any communication with Mr. Randle, excepting with reference to the compromise.

74. Do you not think all this gives a very clear reason why the contractor should have sent in his quarterly account, showing the measurement of this brickwork, and claiming payment thereon? The contractor did send in quarterly measurements, and, with the permission of the Committee, I will append to my evidence copies of all the quarterly measurements by Mr. Randle and our own Engineers, which have not already been published. (*Vide Appendix C.*)

75. *By the Chairman*: Before Mr. Randle obtained payment from you on account, did he ask to see the Engineer's certificates? Never from us; he must have compared his measurements with Mr. Rider or Mr. Mais. All we knew of Mr. Randle was, that the memorandum of our Engineer certified to a certain amount. We passed this, and Mr. Randle was referred to the Treasurer, who paid him a sum on account, without reference to the certificate at all.

76. Did he ask for the Engineer's certificates? Not from us.

77. Did he ever impeach the accuracy of the Engineer's measurements, and say he was given credit for less work than he had executed? I am not aware.

78. So far as you are aware, he took for granted that the Engineer's measurements were correct? He never demurred to take money on the ground that the Engineer's accounts were not correct.

79. *By Mr. Scott*: Do you produce a diagram shewing the amount of work executed in contract No. 1? I do. I had it prepared for the purpose. (*The witness produced the same.*)

80. Does that include the whole of the sewerage works? Yes, executed up to the 10th November, 1856.

81. You have examined these accurately? Yes, I have gone carefully over them; so has our Engineer, who is much better able to do it.

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82. You stated just now, that in your opinion a great portion of this work ought to have been open cut, instead of driven through rock? I referred only to Macquarie Place; that portion which Mr. Darvall and myself called the attention of the Engineer to.

83. *By Mr. Plunkett:* You do not know the extent of that? I do not. I have already stated that I was originally favourable to open cutting, as far as possible, but I also gave my reasons why we had not adopted that mode of working more generally.

84. *By Mr. Scott:* Have you made any calculation of what would have been the saving to the public if the work had been performed by open cutting instead of by driving in rock? No, I have not myself, but it was represented to us at the time the question was started, that upon the whole there would not have been a great saving in the expense. You will find it stated in Mr. Rider's evidence. I never made the calculation myself. I beg to hand in a tabular statement, shewing the length, the size, the maximum and minimum depth, &c., of the sewers, and the work done on them, explanatory of the diagram. (*The witness handed in the same. Vide Appendix D.*)

85. *By the Chairman:* Do you wish, before closing your evidence, to make any statement to the Committee? I should like to state the mode which we adopt of paying our accounts generally in contract works. When a work in the City is brought before us, it is invariably referred to the Surveyor to report whether it would be better to carry it out by contract or by day labour. We receive his report, which generally is to the effect that we could do it better by contract. We then advertise in both daily papers three times for tenders. These tenders are brought in and deposited in a box, which is kept by the Secretary, and the key of which is kept by the Chief Commissioner, so that there can be no possible communication with, or knowledge of the tenders, by any party. At the time appointed, this box is brought into the Commissioners' Office, and opened by the Chief Commissioner, and the tenders are then referred to the Surveyor for his report, on receiving which they are disposed of; either they are all rejected, or one is accepted. Then in the payment of accounts upon contracts, it is usual to pay so much per cent. fortnightly on account; we insist upon the measurements being taken by the clerks of works, certified by them to the surveyor, and certified by the surveyor himself as correct, they are then sent to the Treasurer to be checked as to the calculations, and are then brought to us for payment, and when the work is entirely completed, the account is presented to us shewing the total amount of the measurement, and all the separate payments, and the balance is paid accordingly. This is the system invariably adopted by us, and it is the plan adopted in this larger account of Mr. Randle's. We throw the responsibility of the fortnightly measurements upon the officers of the department, and make a very careful measurement before we pay up the whole sum. I will also state how we are generally employed. Two days a week we have Board Meetings; on another day we have a Court to dispose of cases under the Hackney Carriages and Draymen's Acts; on the other days we have numerous calls upon our time from the public. During our term of office we have received and disposed of 3,395 letters, and have despatched 1,979 besides numerous memoranda to our officers, and our minutes extend to 1,769 folio pages. We have besides this to examine the works and visit places in all parts of the City when required; and I can only say for myself that after working in the office all day, I frequently work from 6 in the evening till 12 or 1 o'clock next morning, getting up financial reports and statements, which cannot be done in office hours. I wish to show that if we have erred in judgment, in some respects, we have not been slothful in the discharge of our duties to the citizens. I would beg further to state, that Mr. Hamilton, the Civil Engineer to whom I have already referred, who is here from South Australia for the purpose of examining our sewerage works, has expressed his willingness to come before the Committee and give his evidence upon the following points, respecting which the Commissioners desire that he should be examined.

1st. His interpretation of the contract with reference to the daily and weekly accounts, as far as the Commissioners are concerned.

2nd. His opinion of the sewerage works with reference to the general plan,—the materials and workmanship.

3rd. His opinion of the various plans and drawings in the Engineer's office connected with the sewerage and water works.

Mr. Hamilton expects to sail for Adelaide to-morrow.

I beg to append a statement showing the comparative amount of Mr. Rider's quarterly measurement to 31st December, 1855, (after the arrangement with Mr. Randle,) and Mr. Bell's quarterly measurement to 31st March, 1856. (*Vide Appendix E.*)

## APPENDIX A.

STATEMENT shewing the difference between the measurement made by the City Engineer and that agreed upon by the City Commissioners and Mr. Randle, in Castlereagh and Pitt Streets up to December the 31st, 1855.

Per Engineer's Certificate of Dec. 31, 1855.		Per agreement.	
CASTLEREAGH-STREET SEWER.			
492-1 ft. lineal tunnelling in rock, 80s.	1,968 6 8	425-1 ft. lineal tunnelling in rock, 80s.	1,700 6 8
72-9 " " " 80s.	291 0 0	212-6 " " " soil, 38s.	403 15 0
72-9 " " " soil, 38s.	138 4 6	Balance .. .. .	293 9 6
637-7	£2,397 11 2	637-7	£2,397 11 2
PITT-STREET SEWER.			
1264 ft. lineal tunnelling in rock, 90s.	5,688 0 0	310 ft. lineal tunnelling in rock, 90s.	1,395 0 0
		636 " " " 90s.	2,862 0 0
		318 " " " in soil, 40s.	636 0 0
		Balance .. .. .	795 0 0
	£5,688 0 0	1264	£5,688 0 0
Balance in Castlereagh-street	.. 293 9 6	Amount of Engineer's Certificate to	
Balance in Pitt-street	.. 795 0 0	December 31st, 1855	.. 81,256 3 1
Total .. .. .	£1,088 9 6	Amount of deduction as above	.. 1,088 9 6
		Balance due.. .. .	£80,167 13 7

Certified correct,—

H. C. MAIS,  
January 31, 1856.

W. B. RIDER, Engineer.

## APPENDIX B.

STATEMENT of the Value of Work performed under Mr. Randle's Contract, and the sums advanced thereon.

Date of Engineer's Memorandum.	Value of Work.	Date of Advances.	Advances on Account of Work done.	Amount retained to cover errors.
1855.		1855.		
June 19 .....	£ 2,796 1 1	June 22 .....	£ 1,500 0 0	£ 1,296 1 1
July 5 .....	6,428 1 0	July 7 .....	4,786 0 0	1,642 1 0
" 19 .....	12,725 7 9	" 20 .....	10,725 7 9	2,000 0 0
August 1 .....	20,663 19 1	August 1 .....	17,663 19 1	3,000 0 0
" 16 .....	31,826 11 8	" 17 .....	20,663 19 1	10,662 12 7
" 30 .....	38,495 9 10	" 30 .....	23,663 19 1	14,831 10 9
September 13 .....	52,445 0 2	September 13 .....	26,663 19 1	25,781 1 1
" 27 .....	55,822 8 6	" 27 .....	39,638 19 1	16,183 9 5
Mr. Rider's Quarterly.				
October 11 .....	60,286 19 3	October 11 .....	42,638 19 1	17,648 0 2
" 25 .....	69,466 16 1	" 25 .....	53,653 19 1	10,812 17 0
November 8 .....	75,241 2 11	November 9 .....	68,683 19 1	6,557 3 10
" 22 .....	78,740 9 5	" 24 .....	71,683 19 1	7,056 10 4
December 6 .....	79,544 7 11	December 13 .....	72,487 17 7	7,056 10 4
" 31 .....	81,256 3 1			
	80,167 13 7			7,679 16 0
Mr. Rider's Quarterly, after deducting £1,088 9s. 6d., the compromise with Mr. Randle.				
1856.		1856.		
January 24 .....	81,834 19 5	January 25 .....	79,168 8 10	2,666 10 7
February 7 .....	84,359 4 10	February 8 .....	81,440 6 3	2,918 18 7
" 20 .....	87,443 8 8	" 22 .....	84,216 1 9	3,227 6 11
March 3 .....	88,861 10 8	March 7 .....	85,492 7 7	3,369 3 1
" 17 .....	90,203 3 10	" 20 .....	86,699 17 5	3,503 6 5
" 31 .....	90,786 17 11			4,087 0 6
	89,282 6 9			2,582 9 4
Mr. Bell's Quarterly, after deducting £1,504 11s. 2d. for rendering not completed, and, therefore, not included in the March Account, but retained in hand.				
April 14 .....	90,087 4 0	April 18 .....	87,424 6 8	2,662 17 4
" 28 .....	90,780 15 10			3,356 9 2
May 12 .....	91,697 7 2	May 16 .....	88,249 6 0	3,448 1 2
" 26 .....	91,764 9 10	" 26 .....	88,873 10 10	2,890 19 0
June 9 .....	92,344 7 0	June 13 .....	89,455 16 11	2,888 10 1
" 23 .....	92,828 9 8	" 27 .....	89,891 11 7	2,936 18 1
July 4 .....	94,669 8 7			4,777 17 0
Mr. Bell's Quarterly.				
July 21 .....	95,370 18 4	July 25 .....	93,022 19 4	2,347 19 0
August 5 .....	96,243 4 0			3,220 4 8
" 18 .....	97,029 9 7	August 22 .....	93,808 1 0	3,221 8 7
September 3 .....	99,968 7 9	September 12 .....	97,225 15 0	2,742 12 9
" 15 .....	102,459 1 8	" 19 .....	99,467 7 6	2,991 14 2
" 29 .....	104,784 13 2			5,317 5 8
" 30 .....	105,539 0 5			6,071 12 11
Mr. Bell's Quarterly.				
October 13 .....	107,299 5 6	October 3 .....	102,060 8 0	3,478 12 5
" 27 .....	108,727 13 10	" 17 .....	103,644 12 7	3,654 12 11
November 10 .....	110,191 9 8	" 31 .....	104,930 4 7	3,797 9 3
" 24 .....	111,522 6 6	November 14 .....	106,247 12 11	3,943 16 9
		" 28 .....	107,445 7 11	4,076 18 7

In addition to the above sum of £4,076 18s. 7d., retained in hand on 24th November, 1856, there is a considerable amount due to Mr. Randle for extra works not yet adjusted.

## APPENDIX C.

CITY COMMISSION,  
Engineer's Department, 185 .

SYDNEY SEWERAGE WORKS.

## SECTION No. .

## MEMORANDUM of Work executed by MR. WM. RANDLE.

To September 27, 1855.

No. 8.

- Main Sewer.*—19 cub. yds. open cutting in rock, 8s. ; 68 do. do., 8s., ; 343 do. do., 8s. 9d. ; 128 do. do., 8s. 9d. 1,819 lin. ft. driving in rock, £5. 57 cub. yds. open cutting in soil, 4s. ; 248 do. do., 4s. 8d. 119 ft. sup. rendering, 9d. ; 18 cub. yds. concrete, 15s. ; 50 do. asphalte, 30s. 1 manhole, 83s. 500 cub. yds. lead,  $\frac{1}{4}$  m., 3s. 8 rods 77 ft. 14-inch brickwork, £42.
- Bridge-street.*—As per Certificate No. 5.
- Pitt-street.*—1,056 cub. yds. open cutting in rock, 8s. 9d. ; 40 do. do., 8s. 9d. ; 109 do. do. 9s. 6d. 32 lin. ft. driving in rock, £4 ; 3,545 do. do., £4 10s. 1,056 cub. yds. open cutting in soil, 4s. 9d. ; 40 do. do., 4s. 9d. ; 109 do. do., 5s. 6d. 119 rods 96 ft. 14-inch brickwork, £42. 5,000 cub. yds. lead,  $\frac{1}{4}$  m., 3s. 64 junctions, 13s. 2 manholes, 83s. 5,940 ft. sup. rendering, 9d. Diversion of Spring-street sewer into Pitt-street, and outlet to Tank Stream, as per Certificate No. 5.
- Elizabeth-street.*—535 cub. yds. open cutting in rock, 8s. 9d. 360 lin. ft. driving in rock, £4. 535 cub. yds. open cutting in soil, 4s. 9d. 5 rods 230 ft. 9-inch brickwork, £42.
- Macquarie-street.*—81 cub. yds. open cutting in rock, 8s. 9d. ; 2,903 lin. ft. driving in rock, £4. 23 cub. yds. open cutting in soil, 4s. 9d. 95 junctions, 13s. 14,250 ft. sup. rendering, 9d. 3,750 cub. yds. lead,  $\frac{1}{4}$  m., 3s. 93 rods 256 ft. 14-inch brickwork, £42.
- Phillip-street.*—222 cub. yds. open cutting in rock, 8s. 9d. 600 lin. ft. driving in rock, £4 ; 32 do. do., £4. 222 cub. yds. open cutting in soil, 4s. 9d.

## ABSTRACT.

## PRICE.

		£	s.	d.	£	s.	d.
<i>Main Sewer.</i>							
87	cub. yds. open cutting in rock ... ..	0	8	0	34	16	0
343	" " " " " " " " " " " "	0	8	9	150	1	3
128	" " " " " " " " " " " "	0	8	9	56	0	0
8	rods 77 ft. brickwork in cement ... ..	42	0	0	346	10	4
119	ft. sup. rendering in cement ... ..	0	0	9	4	9	3
1,819	ft. lin. driving in rock ... ..	5	0	0	9,095	0	0
50	cub. yds. asphalting ... ..	1	10	0	75	0	0
18	" concrete ... ..	0	15	0	13	10	0
1	manhole ... ..	4	3	0	4	3	0
500	cub. yds. of earth lead, $\frac{1}{4}$ m. ... ..	0	3	0	75	0	0
248	cub. yds. excavation, soil ... ..	0	4	8	57	17	4
57	" " " " " " " " " " " "	0	4	0	11	8	0
<i>Bridge-street Sewer.</i> —As per Certificate No. 5.					1,322	16	3
<i>Pitt-street Sewer.</i>							
1,056	cub. yds. open cutting in rock ... ..	0	8	9	462	0	0
1,056	" " " in soil ... ..	0	4	9	250	16	0
40	" " " in rock ... ..	0	8	9	17	10	0
40	" " " in soil ... ..	0	4	9	9	10	0
	Outlet as per Certificate No. 5. ... ..				158	2	3
	Diversion of Spring-street sewer... ..				13	10	0
5,000	cub. yds. lead, $\frac{1}{4}$ m. ... ..	0	3	0	750	0	0
64	junctions ... ..	0	13	0	41	12	0
5,940	ft. sup. rendering in cement ... ..	0	0	9	222	15	0
3,577	ft. run: driving ... ..	4	10	0	16,096	10	0
2	manholes (each) ... ..	4	3	0	8	6	0
119	rods brickwork ... ..	42	0	0	4,998	0	0
109	cub. yds. cutting soil ... ..	0	5	6	29	19	6
109	" " rock ... ..	0	9	6	51	15	6
<i>Elizabeth-street.</i>							
535	cub. yds. open cutting in rock ... ..	0	8	9	234	1	3
535	" " " in soil ... ..	0	4	9	127	1	3
360	ft. driving in rock ... ..	4	0	0	1,440	0	0
5	rods 230 ft. brickwork ... ..	42	0	0	245	10	3
<i>Macquarie-street.</i>							
81	cub. yds. excavation in soil ... ..	0	4	9	19	4	9
23	" " " " " " " " " " " "	0	4	9	5	9	3
2,903	ft. run: driving in rock ... ..	4	0	0	11,612	0	0
95	junctions ... ..	0	13	0	61	15	0
14,250	ft. sup. rendering... ..	0	0	9	534	7	6
3,751	cub. yds. earth, $\frac{1}{4}$ m. lead ... ..	0	3	0	562	13	0
93	rods 256 ft. brickwork ... ..	42	0	0	3,945	9	1
<i>Phillip-street.</i>							
222	cub. yds. open cutting in rock ... ..	0	8	9	97	2	6
222	" " " in soil ... ..	0	4	9	52	14	6
632	ft. run: driving rock ... ..	4	0	0	2,528	0	0

£55,822 6 0

Bligh

*Bligh-street,  
Sydney, 15 October, 1855.*

To the City Commissioners.

Gentlemen,

I herewith beg to hand statement of my Account Current, as per clause in Schedule, to the 27th of September.

I remain, &c.,

JOHN GIBBONS,

(For William Randle.)

*Mr. Randle's Quarterly measurement for December, 1855.*

The City Commissioners			Drs.	To WM. RANDLE.					
31 Decr., 1855			MEASURED WORK.			PRICE.			
yds.	ft.	in.		£	s.	d.	£	s.	d.
<i>Main Sewer.</i>									
57	0	0	cube excavation in soil, (raising water pipes) not exceeding in depth 6 ft. ...	0	4	0	11	8	0
73	2	0	" " at Star Hotel, 12 ft. ...	0	4	9	17	7	1
69	4	0	" " at Junction, 12 ft. ...	0	4	9	16	11	11½
10	1	0	" " at sewer, 12 ft. ...	0	4	9	2	7	8
87	3	0	" in rock at Fort Macquarie, 6 ft. ...	0	8	0	34	16	8
19	26	0	" " manhole, 12 ft. ...	0	8	9	8	14	8
123	8	0	" " at Star Hotel, 12 ft. ...	0	8	9	53	18	10
217	8	0	" " at Star Hotel, 15 ft. ...	0	9	0	97	15	8
399	0	0	" " at quarry, 15 ft. ...	0	9	0	179	11	0
35	3	0	" " manhole, 20 ft. ...	0	9	6	16	13	6½
16	18	0	" concrete... ..	0	15	0	12	10	0
17	13	6	" asphalte... ..	1	15	0	30	12	6
867	14	0	" lead, ¼ mile ... ..	0	3	0	130	2	6½
2213 ft. 10 in			run: tunnelling in rock to 6 ft. sewer ...	5	0	0	11,069	3	4
6 rds. 201 ft.			sup: reduced brickwork in cement ...	42	0	0	283	0	9
737 ft. 6 in.			" rendering with cement ...	0	0	9	27	13	1½
			No. 1, manhole to sewer 8 ft. deep... ..	4	3	0	4	3	0
<i>Pitt-street.</i>									
558	24	0	cube excavation in soil for Outlet to Tank Stream, not exceeding 12 ft....	0	4	9	132	14	8½
953	22	0	" " 12 ft....	...	...	...	226	10	7
75	1	0	" " Hunter-street junction not exceeding 12 ft. ...	0	4	9	17	16	5
48	2	0	" " branches, 12 ft. ...	0	4	9	11	8	4
399	4	0	" " King, Market, and Park-street junctions, 15 ft. ...	0	5	0	99	15	9
30	7	0	" " manholes, 12 ft. ...	0	4	9	7	3	8
15	3	0	" in rock " 12 ft. ...	0	8	9	6	12	2½
953	22	0	" " 12 ft. ...	0	8	9	417	5	10½
75	1	0	" " Hunter-street junction, 12 ft. ...	0	8	9	32	16	7
48	2	0	" " branches, 12ft. ...	0	8	9	21	0	8
399	4	0	" " 3 street junctions, 15ft. ...	0	9	0	179	12	4
7	21	0	" asphalte... ..	1	15	0	13	12	2½
4,009	9	0	" lead, ½ mile ... ..	0	4	6	902	2	0
3,114 ft. 2 in.			run: tunnelling in rock to 4 ft. 6 in. sewer ...	4	10	0	14,013	15	0
91	8		" " to 3 ft. sewer ...	3	10	0	320	16	8
234	0		" 12 in. pipe laid ...	0	0	4	3	18	0
12	0		" 9 in. pipe jointed in cement, Spring-street... ..	0	0	6	0	6	0
206 rds. 239 ft.			sup. reduced brickwork in cement ...	42	0	0	8,688	18	1
14 ft.			" Tank wall... ..	42	0	0	2	3	3
20,249 ft. 9 in.			" rendering with cement ...	0	0	9	759	7	3½
			6 manholes, average 11 ft. deep each ...	5	10	0	33	0	0
			8 cast iron plates fixed ...	2	0	0	16	0	0
			13 12-in. clay junctions fixed ...	0	13	0	8	9	0
			99 12-in. iron ...	2	5	6	225	4	6
			112 holes for junctions in rock ...	0	8	0	44	16	0
<i>Bridge-street.</i>									
408	21	0	cube excavation in soil not exceeding 10 ft. ...	0	4	6	91	19	6
73	10	0	" in rock, not exceeding 10 ft. ...	0	8	6	31	13	8
288	0	0	" lead, ¼ mile ... ..	0	3	0	43	4	0
0	45	0	run: tunnelling in rock to 3 ft. 6 in. sewer ...	4	0	0	180	0	0

		PRICE									
		£	s.	d.	£	s.	d.				
<i>Bridge-street—continued.</i>											
yds.	ft.	in.									
9	155	0	sup. reduced brickwork in cement	...	...	42	0	0	401	18	8
0	477	3	rendering with cement	...	...	0	0	9	17	17	11
			5 12-inch clay junctions fixed, each...	...	...	0	13	0	3	5	0
			5 holes for junctions in soil each	...	...	0	4	0	1	0	0
<i>Castlereagh-street.</i>											
1,378	ft.	1 in.	run: tunnelling in rock to 3 ft. 6 in. sewer	...	...	4	0	0	5,512	6	8
<i>Elizabeth-street.</i>											
yds.	ft.	in.									
5	3	0	cube excavation in soil, No. 2 manhole, not exceeding 6 ft.	...	...	0	4	0	1	0	5
9	7	0	" " No. 1 " 10 ft.	...	...	0	4	6	2	1	8
618	20	0	" " " 10 ft.	...	...	0	4	6	139	4	4
618	20	0	" in rock, " 10 ft.	...	...	0	8	6	262	19	3½
1,229	5	0	" lead, ¼ mile.	...	...	0	4	6	276	11	4
0	387	4	run: tunnelling in soil, to 3 ft. 6 in. sewer	...	...	1	18	0	735	18	8
0	387	4	" " in rock, " "	...	...	4	0	0	1,549	6	8
0	1,464	0	" " " " "	...	...	4	0	0	5,856	0	0
42	rd.	4 ft.	sup. reduced brickwork in cement	...	...	42	0	0	1,764	12	4
4,275	ft.	7 in.	rendering with cement	...	...	0	0	9	160	6	7½
			1 manhole 9 ft. deep	...	...	4	12	0	4	12	0
			1 " 14 ft.	...	...	6	17	0	6	17	0
			13 12-inch clay junctions fixed, each	...	...	0	13	0	8	9	0
			11 cast iron junctions fixed, each	...	...	2	5	6	25	0	6
			24 holes for junctions in rock, each	...	...	0	8	0	9	12	0
			2 cast iron plates fixed, each	...	...	2	0	0	4	0	0
<i>Phillip-street.</i>											
yds.	ft.	in.									
229	5	0	cube excavation, in soil, not exceeding 15 ft.	...	...	0	5	0	57	5	11
229	5	0	" " in rock, 15 ft.	...	...	0	9	0	103	2	8
571	14	0	" lead, ¼ mile	...	...	0	3	0	85	14	6½
2,298	ft.		run: tunnelling in rock to 3 ft. 6 in. sewer	...	...	4	0	0	9,192	0	0
27	rd.	237 ft.	sup. reduced brickwork in cement	...	...	42	0	0	1,170	11	11
4,155	ft.	9 in.	rendering with cement	...	...	0	0	9	155	16	10
			33 cast iron junctions fixed, each...	...	...	2	5	6	75	1	6
			33 holes in rock for do., each	...	...	0	8	0	13	4	0
<i>Macquarie-street.</i>											
yds.	ft.	in.									
30	15	0	cube excavation, in soil, (Outlet) not exceeding 6 ft.	...	...	0	4	0	6	2	2½
87	21	0	" " " 12 ft.	...	...	0	4	9	20	16	11
87	21	0	" in rock, 12 ft.	...	...	0	8	9	38	7	11½
1,949	0	0	" lead, ¼ mile	...	...	0	3	0	292	7	0
325	0	0	" " " "	...	...	0	4	6	73	2	6
2743	run:		tunnelling in rock to 3 ft. 6 in. sewer	...	...	4	0	0	10,972	0	0
0	80	0	" 12-inch pipe laid	...	...	0	0	4	1	6	8
0	13	0	" stone curb fixed to manhole	...	...	0	1	0	0	13	0
95	rd.	160 ft.	sup. reduced brickwork in cement	...	...	42	0	0	4,014	13	1
3795	ft.		rendering with cement	...	...	0	0	9	142	6	3
			62 collars fixed, each	...	...	0	4	0	12	8	0
			2 manholes, average 11 ft. 6 in. deep	...	...	6	14	6	13	9	0
			3 cast iron plates fixed	...	...	2	0	0	6	0	0
									81,718	2	8
<i>Cr.</i> By cash received									72,487	17	7
Bond ...									1,000	0	0
									73,487	17	7
Balance due ...									£8,230	5	1

WILLIAM RANDLE.

## Memorandum.

Mr. Randle gave in to the Commissioners no quarterly account to the 31st March, 1856, for the following reason, as stated in his letter to the Commissioners of the 3rd July, 1856.

"The delay in sending in the March quarterly account has arisen solely from the fact of the City Engineer, in spite of my protest, having persisted in re-opening the measurement up to the 31st December, 1855, and including it in the account alluded to by you\*, which, in Mr. Want's letter of the 26th November last, was stipulated to be a final settlement, and further referred to the fourth paragraph of my letter dated the 14th January last."

E. BELL, City Engineer.

\* The account alluded to above was the account of work done by Mr. Randle to March 31st, 1856.

Mr.

Mr. Randle's Quarterly Measurement for June, 1856.

The City Commissioners,

Drs.

To Wm. Randle.

July 4, 1856.

Main Sewer, 6 ft. by 4 ft.

			PRICE.						
yds.	ft.	in.		£	s.	d.	£	s.	d.
57	0	0	cube excavation in soil (raising water pipes), 6ft.	0	4	0	11	8	0
15	13	6	" " Fort Macquarie, 6ft. ...	0	4	0	3	2	0
73	2	0	" " Star Hotel, 12ft. ...	0	4	9	17	17	1
63	7	0	" " junction, Pitt-street, 12ft.	0	4	9	15	0	6
16	18	0	" " for concrete do. 12ft.	0	4	9	3	19	1
20	12	0	" " Castlereagh-st. junction "	0	4	9	4	17	0
16	5	0	" " Elizabeth-street do. "	0	4	9	3	16	10
10	24	0	" " Macquarie-st. manhole, 30ft.	0	6	0	3	10	9
63	13	6	" in rock, Fort Macquarie, 6ft. ...	0	8	0	25	8	0
123	8	0	" " Star Hotel, 12ft. ...	0	8	9	53	18	9
9	22	0	" " Castlereagh-st. junction, 12ft.	0	8	9	4	5	10
19	26	0	" " Elizabeth-st. manhole, 12ft.	0	8	9	8	14	8
398	26	8	" " Quarry, 15ft. ...	0	9	0	179	10	11
217	7	8	" " Star Hotel, 15ft. ...	0	9	0	97	15	6
24	18	0	" " Macquarie-st. manhole, 30ft.	0	10	6	12	19	0
39	3	0	" " Elizabeth-st. junction, 20ft.	0	9	6	18	11	6
			8 holes in ditto for junction pipes ...	0	8	0	3	4	0
2526	2		lineal tunnelling in rock ...	5	0	0	12,630	16	8
184	8		" " not bricked ...	4	10	0	831	0	0
17	4		" " to 3 ft. 6 in. sewer, at Phillip and Macquarie-street junction ...	4	0	0	69	6	8
1454 $\frac{1}{4}$	0	0	cube lead, not exceeding $\frac{1}{4}$ mile ...	0	3	0	218	2	9
150 $\frac{1}{4}$	0	0	" " $\frac{1}{4}$ " ...	0	6	0	45	1	6
28	0	0	" " $\frac{1}{4}$ " ...	0	6	9	9	9	0
106 rods	81	9	sup. reduced brickwork in cement ...	42	0	0	4,464	12	5
1	53	0	" " taken up labortwade ...	30	0	0	36	1	4
16 yds.	17	10	cube concrete, Pitt-street junction ...	0	15	0	12	9	11
9667	0		sup. rendering with cement ...	0	0	9	362	10	3
17	13	6	cube asphalte, Pitt-street junction ...	1	15	0	30	12	6
			Fixing 3 plates to manholes ...	2	0	0	6	0	0
			" 8 cast iron junction pipes ...	2	5	6	18	4	0
			1 manhole, 2ft. 2in. deep ...				1	10	6
			1 " 4ft. 6in. " ...				2	11	6
			1 " 8ft. deep ...				4	3	0

Macquarie-street, 3ft. 6in. by 2ft. 4in.

30	15	0	cube excavation in soil for outlet, 6ft. deep ...	0	4	0	6	2	2
11	2	4	" " 10ft. ...	0	4	6	2	9	10
8	0	0	" " No. 1 manhole, 10ft. ...	0	4	6	1	16	0
87	21	0	" " open cutting, 12ft. ...	0	4	9	20	16	10
12	13	6	" " No. 3 manhole, 15ft. ...	0	5	0	3	2	6
50	10	0	" " next junction, 15ft. ...	0	5	0	12	11	10
5	14	0	" in rock, 12ft. ...	0	8	9	2	8	6
87	21	0	" " open cutting, 12ft. ...	0	8	9	38	8	1
33	18	0	" " next junction, 15ft. ...	0	9	0	15	3	0
			1 hole in rock for junction pipe ...				0	8	0
2828	1		lineal tunnelling in rock ...	4	0	0	11,312	6	8
15	3		" in soil ...	1	18	0	28	19	6
1423	8	0	cube lead, not exceeding $\frac{1}{2}$ mile ...	0	3	0	213	9	10
237	0	0	" " $\frac{1}{2}$ mile ...	0	4	6	53	6	6
85 rods	44	5	sup. reduced brickwork in cement ...	42	0	0	3,576	17	1
80	0		run 12 pipes, labour only, to outlet ...	0	0	4	1	6	8
13	0		run curbing to manhole ...	0	1	0	0	13	0
10,444	0		sup. rendering with cement ...	0	0	9	391	13	0
			Fixing 4 plates to manholes ...	2	0	0	8	0	0
			Fixing 56 collars ...	0	4	0	11	4	0
			1 clay junction pipe ...	0	13	0	0	13	0
			1 manhole, 6ft. 9in. deep ...				3	11	3
			1 " 7ft. 6in. " ...				3	18	6
			2 " 11ft. 6in. " ...	5	14	6	11	9	0

Castlereagh-street, 3ft. 6in. by 2ft. 4in.

2	14	0	cube excavation in soil to manhole, 10ft. deep...	0	4	6	0	11	4
15	3	0	" " junction, 15ft. ...	0	5	0	3	15	6
5	4	0	" in rock, manhole, 10ft. ...	0	8	6	2	3	9
35	13	0	" " junction, 15ft. ...	0	9	0	15	19	3
			13 holes in $\frac{2}{3}$ rock and $\frac{1}{3}$ soil ...	0	6	8	4	6	8

Castlereagh-

					£	s.	d.	£	s.	d.
<i>Castlereagh-street—continued.</i>										
yds.	ft.	in.			PRICE.					
213	4		lineal tunnelling in soil	...	1	18	0	405	6	8
1232	9		" in rock	...	4	0	0	4,931	0	0
293	9	0	cube lead, not exceeding $\frac{1}{4}$ mile	...	0	3	0	44	0	0
119	6	9	" " $\frac{1}{2}$ mile	...	0	4	6	26	16	7
278	9	0	" " $\frac{3}{4}$ mile	...	0	5	0	68	6	8
11 rods	203	ft.	sup. reduced brickwork in cement	...	42	0	0	493	6	10
	1393	ft.	sup. rendering with cement	...	0	0	4	23	4	4
			1 plate to manhole fixed	...	2	0	0	2	0	0
			13 cast iron junctions	...	2	5	6	29	11	6
			1 manhole, 8ft. 3in. deep	...	.....			4	5	3
<i>Phillip-street, 3ft. 6in. by 2ft. 4in.</i>										
yds.	ft.	in.								
15	17	0	cube excavation in soil to manhole, 10ft. deep...	...	0	4	6	3	10	4
21	12	0	" " junction, 12ft. ....	...	0	4	9	5	1	10
229	5	0	" " open cutting, 15ft. ....	...	0	5	0	57	5	11
15	17	0	" in rock to manhole, 10ft. ....	...	0	8	6	6	12	9
21	12	0	" " junction, 12ft. ....	...	0	8	9	9	7	6
229	5	0	" " open cutting, 15ft. ....	...	0	9	0	103	2	8
			61 holes in rock for junction pipes...	...	0	8	0	24	8	0
2292	7		lineal tunnelling in rock	...	4	0	0	9,170	6	8
11	3		" " to 3ft. sewer	...	3	10	0	39	7	6
1373	19	0	cube lead, not exceeding $\frac{1}{4}$ mile	...	0	3	0	206	1	1
28	21	0	" " $\frac{1}{2}$ mile	...	0	6	0	8	12	8
67 rods	164	ft.	sup. reduced brickwork in cement	...	42	0	0	2,639	5	8
	10,966	ft.	sup. rendering with cement	...	0	0	9	411	4	6
			4 plates to manholes, fixed	...	2	0	0	8	0	0
			61 cast iron junctions, fixed	...	2	5	6	138	15	6
			2 manholes, 6ft. 6in. deep	...	3	9	6	6	19	0
			1 " 8ft. "	...	4	3	0	4	3	0
			1 " 11ft. "	...	.....			5	10	0
<i>Pitt-street, 4ft. 6in. by 3ft.</i>										
yds.	ft.	in.								
953	22	0	cube excavation in soil, open cutting, 12ft. ....	...	0	4	9	226	10	7
558	24	0	" " outlet to T. Stream	...	0	4	9	132	14	8
75	1	0	" " Hunter-st. junction, 12ft. ....	...	0	4	9	17	16	5
48	2	0	" " Hunter-st. branch, 11ft. ....	...	0	4	9	11	8	4
399	4	0	" " King, Market, and Park street junctions, 15ft. ....	...	0	5	0	99	15	9
30	7	0	cube excavation in soil, manholes, 12ft. ....	...	0	4	9	7	3	8
953	22	0	" rock, open cutting, 12ft. ....	...	0	8	9	417	5	10
75	1	0	" " Hunter-st. junction, 12ft. ....	...	0	8	9	32	16	7
48	2	0	" " Hunter-st. branch	...	0	8	9	21	0	7
399	4	0	" " King, Market, and Park street junctions, 15ft. ....	...	0	9	0	179	12	4
15	3	0	cube excavation in rock, manholes, 12ft. ....	...	0	8	9	6	12	2
			99 holes in ditto for junction pipes	...	0	8	0	39	12	0
315	4		lineal tunnelling in soil	...	2	0	0	630	13	4
2790	2		" " rock	...	4	0	0	12,555	15	0
13	4		" " soil	...	1	16	0	24	0	0
78	4		" " rock	...	3	10	0	274	3	4
7	21	0	cube asphalte	...	1	15	0	13	12	2
202 rods	251	ft.	sup. reduced brickwork in cement	...	42	0	0	8,522	16	5
	234	0	lineal 12-inch pipe (labour only) to outlet	...	0	0	4	3	18	0
	12	0	" 9-inch pipe (in cement)...	...	0	0	6	0	6	0
3924	10	0	cube lead, not exceeding $\frac{1}{2}$ mile	...	0	4	6	882	19	8
	20,249	0	sup. rendering with cement	...	0	0	4	337	9	11
			8 iron plates to manholes fixed...	...	2	0	0	16	0	0
			11 clay junction pipes fixed	...	0	13	0	7	3	0
			88 iron "	...	2	5	6	200	4	0
			6 manholes, average 11 $\frac{1}{2}$ ft. ....	...	5	10	0	33	0	0
<i>Elizabeth-street, 3ft. 6in. by 2ft. 4in.</i>										
yds.	ft.	in.								
613	3	4	cube excavation in soil, open cutting, 10ft. ....	...	0	4	6	137	19	0
9	7	0	" " 1 manhole, 10ft. ....	...	0	4	6	2	1	8
12	4	0	" " junction with main sewer, 20ft. ....	...	0	5	6	3	6	10
613	3	5	" in rock, open cutting, 10ft. ....	...	0	8	6	260	11	6
62	10	0	" " in junction, 20ft. ....	...	0	9	6	29	12	6
			12 holes in ditto for junction pipes	...	0	8	0	4	16	0
3170	11		lineal tunnelling in rock	...	4	0	0	12,683	13	4
49	5		" " not bricked	...	3	10	0	172	19	2



		£ s. d.		£ s. d.	
<i>Elizabeth-street—continued.</i>					
yds.	ft. in.			PRICE.	
387	4	lineal tunnelling in soil	...	1 18 0	735 18 8
170	0 0	cube lead, not exceeding $\frac{1}{4}$ mile	...	0 3 0	25 10 0
1467	0 0	" " " $\frac{1}{2}$ "	...	0 4 6	330 1 6
108 $\frac{1}{4}$	0 0	" " " 1 "	...	0 5 6	29 15 4
112 $\frac{1}{2}$	0 0	" " " 1 $\frac{1}{4}$ "	...	0 6 0	33 15 0
44 rods	17ft. 4in.	sup. reduced brickwork in cement	...	42 0 0	1,850 13 6
4275	7	" rendering with cement	...	0 0 4	71 5 2
		3 plates to manhole fixed	...	2 0 0	6 0 0
		12 cast iron junction pipes fixed	...	2 5 6	27 6 0
		9 clay collars ditto	...	0 4 0	1 16 0
		1 manhole, 5ft. 6in.	...	3 0 6	3 0 6
		1 manhole, 9ft.	...	4 12 0	4 12 0
		1 manhole, 14ft.	...	6 17 0	6 17 0
<i>Bridge-street, 3ft. 6in. by 2ft. 4in.</i>					
yds.	ft. in.				
383 $\frac{3}{4}$	0 0	cube excavation in soil, open cutting, 10ft.	...	0 4 6	86 6 10
78	11 0	" " " rock, " 10ft.	...	0 8 6	31 3 11
		5 holes in soil for junction pipes	...	0 4 0	1 0 0
196 $\frac{1}{4}$	0 0	cube lead not exceeding $\frac{1}{4}$ mile	...	0 3 0	29 8 1
46	10	lineal tunnelling in rock	...	4 0 0	187 6 8
9 rods	152ft.	sup. reduced brickwork in cement	...	42 0 0	401 9 5
467	0	" rendering with cement	...	0 0 4	7 15 8
		5 clay junction pipes fixed	...	0 13 0	3 5 0
					<u>95,897 11 9</u>
<i>Cr.</i>					
		By Cash received	...	£92,391 12 7	
		" Reservation	...	1,000 0 0	
					<u>93,391 12 7</u>
				Balance due	<u>£2,505 19 2</u>

Correct copy.  
 WILLIAM C. BENNETT,  
 Assistant Engineer.  
 JAS. COWLISHAW.

*Mr. Randle's Quarterly Account for September, 1856.*

*Main Tunnel and Sewer.*—940·19 cub. yds. lead,  $\frac{1}{4}$  mile, 3s. 184 ft. 8 in. packed, 10s. 52 rods 216 $\frac{1}{2}$  ft. 9-inch brick-work, £42. 13,916 ft. rendering, at 9d. Laying sub-drain, £650.

*Castlereagh-street.*—\*50·21 cub. yds. open cutting in rock, 8s. 9d.; 629·21 do. do., 8s. 9d.; 300 do. do. lead,  $\frac{1}{4}$  mile, 3s.; 449 do. do.,  $\frac{3}{4}$  mile, 5s. 1,252·1 lin. ft. driving in rock, £3 10s. Sub-drain:—404·6 cub. yds. open cutting in rock, 3s. 385 pipes, 4d. 2 holes for pipes, 2s. 3d. and 1s. 3d.—6s. 8d. 191·2 lin. ft. driving in rock, 3s. 6d.; 100 do. do., 1s. 9d. \*604 $\frac{1}{2}$  cub. yds. open cutting in soil, 4s. 9d.; \*641·6 do. half-and-half, 6s. 9d.; 216·15 do. open cutting in soil, 5s. 8·10 lin. ft. driving in soil, 38s. 25 rods 269 ft. 9-inch brickwork, £42. 4,080 ft. rendering, 9d.; 1,124 ft. 2 in. do. 4d. 1 manhole 7 ft. 9 in. deep, 80s. 9d.; 1 do. 4 ft. 4 in. deep, 50s. 2 plates fixed 40s. 2 junction pipes, 45s. 6d.

*Macquarie-street.*—3,211 rods 10 ft. rendering, 9d.  
 \* Subject to 7 and a-half per cent. for filling to be done.

ABSTRACT.

		PRICE.		£ s. d.	
yds.	ft. in.				
184	8	lineal tunnel packed	...	0 10 0	92 6 8
940	19 0	cube lead, $\frac{1}{4}$ mile north of No. 4 shaft	...	0 3 0	141 2 1
52 rods	216 ft. 6 in.	reduced brickwork in cement	...	42 0 0	2,217 8 7
	13,916 ft.	sup. rendering with cement	...	0 0 9	521 17 5
		Laying sub-drain	...	.....	650 0 0
<i>Castlereagh-street.</i>					
yds.	ft. in.				
604 $\frac{1}{2}$	0 0	cube excavation in soil, 12ft. { Between } 4s. 9d. 143 11 4			
50	21 0	" " in rock, " { Park and } 8s. 9d. 22 4 3			
641	6 0	" " $\frac{1}{2}$ soil and $\frac{1}{2}$ rock { Market Sts. } 6s. 9d. 216 8 1			
				382 3 8	
Deduct 7 $\frac{1}{2}$ per cent. for filling in to be done...				28 13 2	
					<u>353 10 6</u>

			£	s.	d.	£	s.	d.
<i>Castlereagh-street—continued.</i>								
yds.	ft.	in.	PRICE.					
216	15	0	cube excavation in soil	{ North of } 15ft. ...	0	5	0	54 2 9
629	21	0	"	" in rock { No. 4 shaft } "	0	9	0	283 8 0
	8	10	lineal tunnelling in soil	... ..	1	18	0	16 15 8
	1,252	1	"	" in rock ... ..	3	10	0	4,382 5 10
449	0	0	cube lead, $\frac{3}{4}$ mile	... ..	0	5	0	112 5 0
300	0	0	"	" $1\frac{1}{4}$ " ... ..	0	6	0	90 0 0
25 rods	269	ft.	reduced brickwork in cement	... ..	42	0	0	1,091 10 9
	4,080	0	sup. rendering with cement	... ..	0	0	9	153 0 0
	1,124	2	"	" " " " ... ..	0	0	4	18 14 9
	404	6	lineal sub-drain in open cutting	... ..	0	3	0	60 13 6
	100	0	"	" " " less pipes	0	1	9	8 15 0
	191	2	"	" " tunnel ... ..	0	3	6	33 9 1
	385	0	"	" pipes laid in open cutting	0	0	4	6 8 4
			1 manhole	7 ft. 9 in. deep ... ..				4 0 9
			1 "	4 ft. 4 in. " ... ..				2 10 0
			2	cast-iron plates fixed ... ..	2	0	0	4 0 0
			2	" junction pipes fixed ... ..	2	5	6	4 11 0
			2	holes for do. in $\frac{2}{3}$ rock and $\frac{1}{3}$ soil ... ..	0	6	8	0 13 4

*Macquarie-street.*

ft.	in.		£	s.	d.	£	s.	d.
3,211	10	sup. rendering with cement	0	0	9	120	8	10
						10,423	17	10

*Cr.*

By Cash received on account...	9,168	16	5
Balance	1,255	1	5

To 1 October, 1856.

ABSTRACT.

			£	s.	d.	£	s.	d.
<i>Main Sewer, 2,973 ft. 1 in.</i>								
yds.	ft.	in.	PRICE.					
63	13	5	cube excavation in rock, Fort Macquarie, 6 ft	... ..	0	8	0	25 8 0
	15	13	"	in soil, " ... ..	0	4	0	3 2 0
398	26	8	"	in rock, at quarry, 15 ft. ... ..	0	9	0	179 10 11
	24	18	"	in rock, manhole, Macquarie-st. ... ..	0	10	6	12 19 0
	10	24	"	in soil " ... ..	0	6	6	3 10 9
	217	7	"	in rock, Star Hotel ... ..	0	9	0	97 15 6
123	7	10	"	" " " " ... ..	0	8	9	53 18 9
	73	1	"	in soil " " ... ..	0	4	9	17 7 1
	63	7	"	in soil for junction, Pitt-street... ..	0	4	9	15 0 6
	16	17	"	in soil for concrete ... ..	0	4	9	3 19 1
	16	5	"	in soil, Elizabeth-street junction. ... ..	0	4	9	3 16 10
	39	3	"	in rock, " " ... ..	0	9	6	18 11 6
	20	11	"	in soil, Castlereagh-st. junction, 12 ft. ... ..	0	4	9	4 17 0
	9	22	"	in rock, " " " " ... ..	0	8	9	4 5 11
	19	26	"	in rock, Elizabeth-st. manhole.... ..	0	8	9	8 14 8
	57	0	"	raising gas and water mains ... ..	0	4	0	11 8 0
	2710	10	lin. of tunnelling from Fort to Macquarie-place, in rock	... ..	5	0	0	13,554 3 4
159 rods	25ft	3in.	reduced brickwork in cement	... ..	42	0	0	6,681 15 8
	16	17	cube concrete, for main sewer and junctions	... ..	0	15	0	12 9 11
	17	13	"	asphalte, on crown of junction ... ..	1	15	0	30 12 6
	940	19	"	lead, $\frac{1}{4}$ mile, north of No. 4 shaft ... ..	0	3	0	141 2 1
1454 $\frac{1}{4}$	0	0	"	$\frac{1}{4}$ " } to end of 13 $\frac{1}{2}$ -inch brick-	0	3	0	218 2 9
150 $\frac{1}{4}$	0	0	"	$1\frac{1}{4}$ " } work. {	0	6	0	45 1 6
28	0	0	"	$1\frac{3}{4}$ " } {	0	6	9	9 9 0
			1 manhole, 8 ft. deep	... ..				4 3 0
			1 "	4 $\frac{1}{2}$ " " " " ... ..				2 11 6
			1 "	2 ft. 2 in. deep ... ..				1 10 6
			Fixing 3 plates	... ..	2	0	0	6 0 0
			8 cast iron junction pipes, fixing	... ..	2	5	6	18 4 0
			8 holes excavated for do., in rock	... ..	0	8	0	3 4 0

Main

## APPENDIX TO THE FOREGOING EVIDENCE.

71

		£ s. d.			£ s. d.		
<i>Main Sewer—continued.</i>							
yds.	ft. in.		PRICE.				
23,583	7	of rendering with cement	0 0 9	884	7	8	
17	4	lin. of tunnelling 3 ft. 6 in. sewer, in rock, junction Phillip and Macquarie-streets...	4 0 0	69	6	8	
1 rod	55 ft.	reduced brickwork in cement, at Fort, taken up...	30 0 0	36	1	4	
		Making sub-drain in main sewer	.....	650	0	0	

*Pitt-street, length 3,966 ft.*

yds.	ft. in.						
953	22 0	cube excavation in rock, from Bridge to Hunter-street, 12ft ...	0 8 9	417	5	10	
953	22 0	" in soil, " 12ft....	0 4 9	226	10	7	
558	24 0	" " outlet to Tank Stream, 12ft....	0 4 9	132	14	8	
75	1 0	" in rock, Hunter-st. junction 12ft.	0 8 9	32	16	7	
75	1 0	" in soil, " "	0 4 9	17	16	5	
48	2 0	" in rock, branches, Hunter-st. "	0 8 9	21	0	7	
48	2 0	" in soil, " "	0 4 9	11	8	4	
399	4 0	" in rock, } junction of King, 15ft.	0 9 0	179	12	4	
399	4 0	" in soil, } Market & Park-sts. "	0 5 0	99	15	9	
30	7 0	" in soil, } 5 manholes, " 12ft.	0 4 9	7	3	8	
15	3 0	" in rock, } $\frac{1}{2}$ rock, $\frac{1}{2}$ soil, 12ft...	0 8 9	6	12	2	
0	2790 2	lin. tunnelling in rock ...	4 10 0	12,555	15	0	
0	315 4	" in soil ...	2 0 0	630	13	4	
0	78 4	" in rock, for King, Market, and Park street junctions ...	3 10 0	274	3	4	
0	13 4	" in soil, for do. do. ...	1 16 0	24	0	0	
202 rods	251ft.	5in. reduced brickwork in cement ...	42 0 0	8,522	16	5	
0	12 0	lin. of 9-inch pipes in cement, Spring-street ...	0 0 6	0	6	0	
0	234 0	" 12-inch pipes for Outlet to Tank Stream...	0 0 4	3	18	0	
		6 manholes, average depth 11 ft. ...	5 10 0	33	0	0	
		8 iron plates fixed ...	2 0 0	16	0	0	
0	7yds.	21ft. cube asphalte... ..	1 15 0	13	12	2	
0	3924 10	" lead, $\frac{1}{2}$ mile ... ..	0 4 6	882	19	8	
		11 clay junction pipes, 12-inch, fixed ...	0 13 0	7	3	0	
		88 iron " " " " ...	2 5 6	200	4	0	
		99 holes excavated in rock for junctions ...	0 8 0	39	12	0	
20,249ft.	0	superficial rendering with cement ...	0 0 4	337	9	8	

*Macquarie-street, 2,938ft. 6in. in length.*

yds.	ft. in.						
50	10 0	cube excavation in soil, 15ft. ...	0 5 0	12	11	10	
30	15 0	" " for outlet, 6ft. ...	0 4 0	6	2	2	
33 $\frac{2}{3}$	0 0	" " rock, 15ft. ...	0 9 0	15	3	0	
87	21 0	" " 12ft. ...	0 8 9	38	8	1	
87	21 0	" " soil, 12ft. ...	0 4 9	20	16	10	
84	15 0	" " " " " " ...	0 4 6	19	0	6	
2545	8	lineal tunnelling in rock ...	4 0 0	10,182	13	4	
252	0 0	" " soil ...	1 18 0	478	16	0	
80	0	lineal 12-inch pipes for outlet ...	0 0 4	1	6	8	
85 rods	44ft.	reduced brickwork in cement ...	42 0 0	3,576	15	10	
		2 manholes, 11ft. 6in. ...	5 14 6	11	9	0	
		2 manholes, £3 11d. 9d.—£3 18s. 6d. ...	.....	7	10	3	
		fixing 4 plates ...	2 0 0	8	0	0	
13	0	lineal of curbing to manhole ...	0 1 0	0	13	0	
12 $\frac{1}{2}$ yds.	0 0	cube excavation in soil for 1 manhole, 12 $\frac{1}{2}$ ft. ...	0 5 0	3	2	6	
8	0 0	" " " " 8ft. ...	0 4 6	1	16	0	
11	2 4	" " " " " " ...	0 4 3	2	9	10	
5	10 8	" " rock ...	0 9 0	2	8	6	
		56 12-inch collars ...	0 4 0	11	4	0	
		1 " clay junction pipe, 8s.; hole for do., 4s. ....	.....	0	12	0	
1423	8 0	cube lead, $\frac{1}{2}$ mile ...	0 3 0	213	9	10	
237	0 0	" " " " " " ...	0 4 6	53	6	6	
13,655	10	of rendering with cement ...	0 0 9	512	1	10	

*Elizabeth-street.*

yds.	ft. in.						
49	5	lineal tunnelling in rock, not packed ...	3 10 0	172	19	2	
3170	11	" " " " " " ...	4 0 0	12,683	13	4	
387	4	" " soil ...	1 18 0	735	18	8	
613	3 4	cube excavation in rock, 10ft. ...	0 8 6	260	11	6	
613	3 5	" " soil ...	0 4 6	137	19	0	

*Elizabeth*

			£	s.	d.	£	s.	d.
<i>Elizabeth-street—continued.</i>								
yds.	ft.	in.	PRICE.					
9	7	0	cube excavation in manhole, 10ft.	...	...	0	4	6
12	4	0	" " soil at junction, 16ft. 10in.	...	...	0	5	6
62	10	0	" " rock	...	...	9	6	0
44 rds.	17ft.	4in.	reduced brickwork in cement	...	...	42	0	0
			1 manhole, 14ft.	...	...			6 17 0
			1 " 9ft.	...	...			4 12 0
			1 " 5½ft.	...	...			3 0 6
			12 iron pipes for junctions	...	...	2	5	6
			3 manholes plates fixed	...	...	2	0	0
170yds.	0ft.	0	cube lead, ¼ mile	} From crossing of Hunter-st. to south end of sewer	...	0	3	0
1467	0	0	" ½ "		...	0	4	6
108½	0	0	" 1 "		...	0	5	6
			9 clay collars for junctions, 12-inch	...	...	0	4	0
			12 holes for junctions in rock	...	...	0	8	0
4182	8		rendering with cement	...	...	0	0	4
<i>Phillip-street, 2,505ft. in length.</i>								
yds.	ft.	in.						
2292	7		lineal tunnelling in rock	...	...	4	0	0
	11	3	" " 3ft. sewer, Bridge-st.	...	...	3	10	0
229	5	0	cube excavation in rock, 15ft.	...	...	0	9	0
229	5	0	" " soil, 15ft.	...	...	0	5	0
67 rods	163ft.		9-in. reduced brickwork in cement	...	...	42	0	0
			61 cast iron junctions	...	...	2	5	6
1373yds.	19ft.	0	cube lead, ¼ mile	...	...	0	3	0
28	21	0	" "	...	...	0	6	0
			1 manhole, 6ft. 6in.	...	...			3 9 6
			1 " 8ft.	...	...			4 3 0
			1 " 11ft.	...	...			5 10 0
			1 " 6ft. 6in.	...	...			3 9 6
			4 plates fixed	...	...	2	0	0
15	16	10	cube excavation in rock for manhole, 10ft.	...	...	0	8	6
15	16	10	" " soil	...	...	0	4	6
21	12	0	" " rock, Bridge-st. junction, 12ft.	...	...	0	8	9
21	12	0	" " soil	...	...	0	4	9
			61 holes for junction pipes in rock	...	...	0	8	0
			10,966 sup. ft. rendering	...	...	0	0	9
<i>Castlereagh-street.</i>								
yds.	ft.	in.						
1232	9		lineal tunnelling in rock	...	...	4	0	0
1252	1		" " not packed	...	...	3	10	0
222	2		" " soil	...	...	1	18	0
37 rods	200ft.		reduced brickwork in cement	...	...	42	0	0
35yds.	12ft.	9	cube excavation in rock, junct. of main sewer, 15ft.	...	...	0	9	0
15	2	7	" " soil	...	...	0	5	0
216	15	0	" " north of No. 4 shaft,	...	...	0	5	0
629	21	0	" " rock	...	...	0	9	0
604½	0	0	" " soil between Park and Market streets, 12ft., at 4s. 9d.	...	...	£143	11	4
641	6	0	" " mixed material, between do., 12ft., at 6s. 9d.	...	216	8	1	
50	21	0	" " rock, between do., 12ft., at 8s. 9d.	...	...	22	4	3
						382	3	8
Deduct 7½ per cent. (equal to 15 per cent. of half the above,) for filling in						28	13	2
1,830	0		sup. rendering in cement	...	...	0	0	9
2,517	2		" "	...	...	0	0	4
			15 cast-iron junction pipes	...	...	2	5	6
			15 holes for do.	...	...	0	6	8
			3 manholes 4ft. 4in., 50s.; 7ft. 9in., 80s. 9d.; } 8ft. 3in., 85s. 3d. .... }	...	...			10 16 0
			Fixing 3 plates	...	...	2	0	0
5	4	0	cube excavation in rock for manhole 10ft.	...	...	0	8	6
2	14	0	" " in soil	...	...	0	4	6
300	0	0	cube lead, ¼ mile	...	...	0	6	0
722½	0	0	" ¾ "	...	...	0	5	0
119½	0	0	" ½ "	...	...	0	4	6

		£ s. d.		£ s. d.					
<i>Castlereagh-street—continued.</i>									
yds.	ft.	in.	PRICE.						
293 $\frac{1}{2}$	0	0	0	3	0	44	0	0	
100	0	0	of sub-drain in rock open cutting 3s., less } pipe 1s. 3d. ... .. } ... .. }	0	1	9	8	15	0
385	0	0	lineal of pipes laid under sewer ... ..	0	0	4	6	8	4
103	2	0	„ chase in tunnel ... ..	0	3	6	18	1	1
406	10	0	„ „ open cutting ... ..	0	3	0	61	0	6
<i>Bridge-street.</i>									
yds.	ft.	in.							
383 $\frac{3}{4}$	0	0	excavation in soil ... ..	0	4	6	86	6	10
73	11	0	„ in rock ... ..	0	8	6	31	3	11
	46	10	lineal of tunnelling ... ..	4	0	0	187	6	8
9 rods	152ft.		brickwork in cement ... ..	42	0	0	401	9	5
			5 clay junctions ... ..	0	13	0	3	5	0
yds.	ft.	in.							
196 $\frac{1}{2}$	0	0	cube lead $\frac{1}{4}$ m., including portion next main sewer	0	3	0	29	8	9
			5 holes excavated for junction in soil... ..	0	4	0	1	0	0
84	15	0	excavation in soil, Macquarie-street, to be } allowed as 45ft. tunnelling $\frac{1}{2}$ rock $\frac{1}{2}$ soil ... }						
	22	6	tunnelling in rock, £4 ... ..	90	0	0			
	22	6	„ in soil, £1 18s. ... ..	42	15	0			
				132 15 0					
Deduct amount paid for excavation, } 84 yds. 15 ft., 4s. 6d.... }				19 0 6					
				113 14 6					
				105,630 12 5					
The levels of part of the work done in Bridge-street } were wrong, and are not yet corrected; the } amount to withhold until it is corrected is ... }				91 12 0					
				£105,539 0 5					

The above is correct for work done since I have been here, and, for that done previously, so far as I have been able to discover.

WILLIAM C. BENNETT,  
Assistant Engineer.

EDWARD BELL,  
City Engineer.

APPENDIX D.

SUMMARY of WORK done on SEWERS to 27 OCTOBER, 1856.

	MAIN SEWER.	BRIDGE STREET.	MACQUARIE STREET.	PHILLIP STREET.	ELIZABETH STREET.	CASTLEREAGH STREET.	PITT STREET.
Length.....	ft. in. 2,973 3	ft. in. 401 0	ft. in. 2,938 6	ft. in. 2,505 0	ft. in. 4,386 0	ft. in. 4,320 0	ft. in. 3,966 0
Size .....	6ft. x 4ft.	3ft. 6in x 2ft. 4in.	3ft. 6in. x 2ft. 4in.	3ft. 6in. x 2ft. 4in.	3ft. 6in. x 2ft. 4in.	3ft. 6in. x 2ft. 4in.	4ft. 6in. x 3ft.
Maximum depth .....	55 ft. 6 in.	12 ft. 9 in.	19 ft. 0 in.	16 ft. 2 in.	30 ft. 6 in.	24 ft. 5 in.	18 ft. 6 in.
Minimum depth .....	10 0	.....	7 9	9 10	8 7	10 0	9 0
Tunnelling in rock .....	ft. in. 2,710 10	ft. in. 46 10	ft. in. 2,545 6	ft. in. 2,293 0	ft. in. 2,833 0	ft. in. 2,274 10	ft. in. 2,159 6
Do. in soil .....	.....	.....	252 0	.....	.....	.....	.....
Do. in mixed .....	.....	.....	45 0	.....	774 8	666 6	946 0
Open cutting, rock .....	177 0	41 0	.....	.....	.....	.....	.....
Do. soil .....	18 0	259 6	.....	.....	.....	.....	.....
Do. mixed .....	67 3	.....	95 10	198 0	756 0	1,183 0	860 6
Brickwork, 9-inch .....	1,918 0	335 6	2,749 6	2,341 9	1,546 5	2,402 0	1,997 0
Do. do., invert .....	.....	.....	.....	.....	.....	323 0	.....
Do. 14-inch .....	968 0	.....	189 0	.....	.....	.....	1,870 0
Do. in junctions .....	80 6	.....	.....	16 0	.....	.....	98 0
Rendering, 9d.....	2,973 3	.....	1,856 8	1,938 0	.....	325 4	.....
Do. 4d.....	.....	.....	.....	.....	743 7	447 6	3,138 7
Lead.....	2,012 0	348 0	2,867 0	2,490 0	3,141 8	2,583 0	3,867 6
Manholes .....	4	.....	4	4	3	5	8
Junction pipes, iron.....	8	.....	.....	61	12	15	88
Do. clay.....	.....	5	1	.....	.....	.....	11
Do. collars.....	.....	.....	56	.....	.....	.....	.....

APPENDIX

APPENDIX TO THE FOREGOING EVIDENCE.

APPENDIX E.

STATEMENT shewing the difference between Mr. Rider's Quarterly Measurement of December, 1855, and Mr. Bell's Quarterly Measurement for March, 1856.

	£	s.	d.
1855.			
Amount of Mr. Rider's Quarterly Certificate for December, 1855, after deducting for tunnelling in Castlereagh and Pitt Streets, as arranged between the Commissioners and Mr. Randle . . . . .	80,167	13	7
1856.			
<i>Fortnightly Measurements:—</i>			
Certified by Mr. Rider, January 24th . . . . .	£1,667	5	10
"    Mr. Mais, February 7th . . . . .	2,524	5	5
"    Mr. Bell, February 20th . . . . .	3,084	3	10
"    Mr. Bell, March 3rd . . . . .	1,418	2	0
"    Mr. Bell, March 17th . . . . .	1,341	13	2
* Estimated amount of fortnightly certificate from 17th March, included in Mr. Bell's quarterly certificate of March 31st . . . . .	900	0	0
		10,935	10 3
	£91,103	3	10
Amount of Mr. Bell's Quarterly Measurement for March, 1856 . . . . .	90,786	17	11
Difference between the Quarterly Measurements of 31st December, 1855, and 31st March, 1856 . . . . .	£316	5	11

\* The fortnightly measurements after 17th March were considerably reduced in consequence of the contraction of the works; the average amount of the fortnightly accounts for the next quarter being only £582 17s. 2d. Although the exact work done during the last fortnight of March cannot be separated from the quarterly measurement in which it was included, the sum of £900 has been estimated by Mr. Bell as near an approximation to the truth as can be arrived at.

WEDNESDAY, 3 DECEMBER 1856.

Present:

MR. EGAN,		MR. LANG,
MR. JONES,		MR. OXLEY,
	MR. SCOTT.	

RICHARD JONES, ESQ., IN THE CHAIR.

Edward Bell, Esquire, C. E., M. Inst. C. E., called in, and examined:—

1. *By the Chairman:* I believe you are the Engineer to the City Commissioners' Department? I am.
2. At what date did you receive the appointment? On the 12th of February last.
3. You succeeded Mr. Rider, I believe? I did.
4. Will you be kind enough to state to the Committee your opinion of Mr. Rider's general plan for carrying out the sewerage works of the City? I have seen no plan of any works beyond this section (Sec. No. 1 City Sewerage Works.) I do not know what his intentions were as to the sewers of the City beyond the section included within George-street and Macquarie-street, Bathurst-street on the south, and the main sewer on the north.
5. Beyond that you do not know whether he had any plan devised? I believe not. I found no plan in the office when I entered it. I had a return made of all the plans in the office at the time I went there. (*The witness handed in the same. Vide Appendix A.*)
6. Confining my question to the section which is now under contract, do you conceive that the plan for the sewerage is correct in principle? The plans comprised merely the longitudinal plans.
7. I am not now speaking of the drawings, but of the general scheme of Section 1? I understand you; but it is necessary I should explain that the only plans I saw of the sewers were longitudinal sections of the sewers which run down the main streets; there is no plan for the back drainage, or drainage for the cross streets that I am aware of, consequently I can only give an opinion upon the longitudinal main sewers. I think they are very well adapted to the purpose indeed; I do not think a much better plan could have been devised.
8. In your examination of the plan are you satisfied that adequate provision has been made for the connexion of drains from the houses with the sewers? I have only found one exception, that is in Pitt-street, at the Union Bank. I have heard of one lower down, but I have not been able to examine that, because the sewer is in use there, I believe. It is opposite to Brown's stores.
9. You consider the sewers in this section, which have been partially carried out under Mr. Rider, are quite adequate for the purpose of effectually draining that part of the City? Yes.
10. Do you think they are more expensive than are necessary? I think they might have been done cheaper.
11. Upon a system that you think would have been equally effective? Yes, equally effective. I refer to the mode of carrying out the work.

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12. In what respect do you mean that a cheaper system could have been devised? A cheaper plan with regard to the excavation or tunnelling in a few places.
  13. Have you read the reports that were furnished by Mr. Rider, soon after his appointment, in reference to the sewerage? Yes, but not lately; it is some time since I did.
  14. From reading those reports, do you consider that they indicate that sufficient surveys had been made, and care taken before entering on the work to obtain all the necessary preliminary information? It does not appear that the soil was examined as it should have been. I think Mr. Rider ought to have satisfied himself, before recommending a contract to be entered into, what soil the sewers would have to pass through, where it was rock, and where soil. I should have done so; but it is a matter of opinion.
  15. As regards the survey taken with a view to ascertain the levels and so on, do you think sufficient care was taken? Yes; the levels in the longitudinal streets I found tolerably correct.
  16. You conclude, therefore, that the requisite care had been taken with reference to that branch of the work? Yes.
  17. Will you describe what plans and drawings you found in the Engineer's Office on taking charge of the department, I mean with reference to the Sewerage Works? I have not the list with me, it was drawn up at the time. There were two lists, one drawn up by the assistant on the sewerage, and the other by the assistant at the waterworks.
  18. A return was handed in to the Committee by Mr. Rae, would that be correct? I do not know; I did not read it through before it came. I think there was a difference with reference to the detail drawings and those for the junctions. I found the longitudinal sections of five streets ready, shewing sections of the lines of sewers intended to be carried out under Mr. Randle's contract, simply the levels. That was probably quite enough to guide the Commissioners and give them a knowledge of what was to be done; but I did not find the detailed drawings, so that without going to the sewers, I could not find what was intended to be done, and what was doing.
  19. You think these plans ought to have been in existence? If Mr. Rider had them, they ought to have been deposited in the office; but I have found that he had not them.
  20. You have reason to believe that he had not them personally? I do not think they were ever made.
  21. Do you think the plans found in the office were sufficient to enable the Engineer to carry out the work correctly—to ensure its being carried out correctly? As regards the level, quite so.
  22. As regards these other detailed drawings? I apprehend the people in the office could tell no better than myself what Mr. Rider intended, unless he had previously told them. I expected to find it on paper, so that I could go on at once. I think an Engineer ought to have his plans and papers in such a state that in the event of death, or anything happening to him, his successor could forthwith decide whether to carry on the work to them or not.
  23. Before you could go on with the works you had to examine what had already been executed? Yes; but I allowed the works to proceed, as I thought I could get a better insight into the works in a fortnight or three weeks while they were going on, than I could by stopping them, and I made scarcely any alterations until I had seen the measurements taken, and every thing done for a time.
  24. Has there been any departure from the original plan of Mr. Rider since you took charge of the department? No, not in the plan; I would not allow it, simply because it was likely to create a difference with the contractor.
  25. I do not mean technically, but any change in the mode of draining the City from that contemplated by Mr. Rider? I have suggested that the remainder of the water-shed of that part lying on the western side of George-street should be brought into the present main sewer, as being sufficiently copious for it, and that being the natural outlet.
  26. What was the plan contemplated by Mr. Rider for draining that portion? I understood that Mr. Rider intended to carry a tunnel down George-street, which would be a kind of main sewer for that portion of the watershed to discharge itself at Dawes' Point.
  27. Have you now abandoned that intention? Yes. My attention was drawn particularly to that street in the first instance, by Mr. Elliott, who requested me to give my special consideration to it, and to see if a main sewer in George-street could be dispensed with.
  28. And you found that George-street, and some portion of the City to the westward of George-street, could be drained by cross sewers into the present main sewer? Yes.
  29. By that means you remove the necessity for constructing a main sewer down George-street? Yes.
  30. What was the probable cost of carrying out the original intention of constructing a main sewer down George-street? About (£52,000), fifty-two thousand pounds.
  31. That, of course, would be exclusive of cross sewers to drain other portions of the City into the main sewer? Yes.
  32. That would be simply the cost of the main sewer down George-street? Yes, without the cross sewers leading into it from the hills westward of George-street, or the cross sewers eastward of George-street leading into Pitt-street.
  33. *By Mr. Oxley:* Simply the main tunnel? Simply the main tunnel.
  34. *By the Chairman:* What are your reasons for making the change? Because that part west of George-street, as far as York and Clarence Streets, was part of the same watershed as Section No. 1, City Sewerage Works, and naturally formed part of the same drainage; that was the first thing that attracted my attention.
  35. You found this main sewer in George-street would not be necessary? Yes.
  36. What is your estimate of the cost of the works that will now drain that portion of the City? £43,000 (forty-three thousand pounds.) This amount, I believe, will more than cover the cost. (*The witness handed in an estimate. Vide Appendix B.*)
  37. Do I understand you to say that the plan now decided upon would be fully as effective for draining all that portion of the City? Decidedly.



38. Supposing you had been Engineer for the works at the time they were originally undertaken, what steps would you have considered it necessary to take before you would have felt yourself to be in a position to determine the comparative eligibility of the various tenders sent in, varying, as I think you will find they did, in their charges as to the different kinds of work to be performed? I should have made an analysis of the different tenders, according to the way in which I intended to carry out the work.
39. Would you have considered it necessary, to enable you to judge of the relative cheapness or dearness of the tenders to do the work, to have ascertained by boring or by other means, the strata, the character of the ground through which the excavation would have to be carried? Certainly.
40. Do you think that any professional or reliable estimate could have been formed of the probable cost without this preliminary work? No. It is always customary in such cases for the Engineer to make openings for the purpose of examining the soil; the contractor has the use of these openings also, and if he do not trust them, he can make fresh openings at his own cost.
41. Do you think it possible for an Engineer to make an estimate at all approximating to the actual cost, without having first bored the ground through which the works have to be carried? I do not, unless he knew the strata from works previously executed in the localities, otherwise he could not have known them, and must necessarily have made openings in the line of sewers for the purpose.
42. I gather that you think the Engineer ought not to have founded an analysis upon the various tenders until he had been in the possession of information to enable him to judge pretty accurately the nature of the ground? I should not myself have felt justified in doing so. I may state that, from what I now know of the sub-soil under the town, I can form a tolerable estimate.
43. Having, of course, got the information which previously you could have obtained only from boring or digging? Yes.
44. Do you not think it would have been infinitely better to have incurred whatever expense was necessary for determining these points before entering upon the works, than to have been so exceedingly out between the estimate and the actual cost of the work? I have adopted this system, and I do not find it so expensive; but, whatever the expense, I should have felt justified in doing it.
45. Do you think you would be justified in determining upon the eligibility of a tender without doing it? No. All Engineers directed to form an estimate of the expense of such works before doing so must ascertain the nature of the ground through which they are to be carried. I should not feel justified, as a professional man, in omitting to do so; I should be not only deceiving myself but others if I did not make such an examination.
46. Was it not absolutely necessary, in order that the Engineer might judge of the probable amount of open cutting and tunnelling, that he should be in possession of this information? He could decide upon the tunnelling according to the depths.
47. Would not the character of the sewer also have influenced his decision upon these points? In some respects it would.
48. I mean his decision as to the tenders, because you will have observed that the persons who tendered for this work varied in their charges for the different kinds of works; to have enabled him to make an analysis, would it not have been necessary for him to have been in a position to ascertain the character of the ground and the probability of the sewer being made either by open work or by tunnelling? His sections would first lead him to decide whether it would be more advisable to make tunnelling or open cutting. If the sewer were more than 15 or 16 feet below the surface of the ground, it would be more convenient to tunnel. If it were through a dense part of the town, and had to be excavated through rock, it might be dangerous to carry on the work by open cutting,—dangerous not only to property, but to life, from the debris that would be thrown up. In such cases he would probably choose to go through rock by tunnelling, but where the soil was soft, he might safely carry on the work by open cutting. He might decide by his drawings whether he would adopt tunnelling here or there, but before that he must ascertain the character of the ground.
49. Are you aware what steps were taken in reference to this matter before the tenders were analysed? Not at all.
50. Have you reason to believe that the Engineer had not bored or dug to ascertain the character of the ground through which he would have to carry his excavations? It has been so generally stated to me; I have found no marks of any such trial, and can find no information respecting them in the office.
51. There are no records in the office to lead you to believe that these steps, which you yourself would have considered necessary, were taken before entering upon these important works? There are none.
52. Have you examined the tenders sent in before the commencement of the work? I think I have seen them all.
53. And the Engineer's analysis of them? Yes.
54. Have you examined them with sufficient care to enable you to say whether, in your opinion, the best tender was accepted? I have not been able to find any papers of Mr. Rider which would enable me to understand the system he adopted in arriving at his conclusions. I only suppose, from his estimate being so low, that he must have taken Mr. Randle's price for excavation, and have allowed a very large margin for that description of work.
55. Looking at the Engineer's estimate, looking also at the tenders sent in by various parties, and at the Engineer's analysis of these tenders, are you satisfied that the tender most advantageous to the City was accepted? I think it would have been, if Mr. Randle had had more open cutting to do. If he had been ordered to do open cutting instead of tunnelling, I think Mr. Randle's tender would have been as advantageous as any tender put in. Some of the other tenders contained extraordinary prices for some descriptions of work.

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56. *By Mr. Lang:* With the knowledge they had at the time, or rather their want of knowledge at the time, of what was under ground, of what was rock, and what was soil, and taking the work on a schedule of prices, you think Mr. Randle's was the best tender? I think, on the whole, Mr. Randle's was the best, that is, supposing that more excavation had been ordered to be done, and less tunnelling, for the tunnelling price was high, while the excavation price was exceedingly low, lower in fact than he could afford to do it, unless he had very favorable soil.

57. *By the Chairman:* In carrying out the work, much more tunnelling was performed than was contemplated, and much less excavation? Yes, evidently, for the whole of the tunnelling in the main sewer is estimated at 1,320 feet, while the actual quantity of tunnelling is 2,700 feet.

58. Will you turn to the contract for constructing the main sewers, at page 13 of the Final Report, where you will find the contract—is that contract, in your opinion, a business like document, and does it contain sufficient conditions for the due fulfilment of all the obligations of the contract, looking to the extent and nature of the work? These are general conditions; there is no specification to them.

59. Ought there to have been such specification? Yes.

60. How do you account for this omission? I do not know. These conditions are chiefly taken from some contracts for sewers that I have seen in England. It appears to me that they are taken from the form of contract for the Westminster sewers.

61. Is the omission of a specification a material omission? Yes; though I have a copy of the Westminster sewers contract with me, and the Sydney contract accords very nearly with its conditions except as to payment, some clauses are omitted, and there is no specification.

62. *By Mr. Wilshire:* Is there any specification to the Westminster contract? No.

63. *By the Chairman:* In your opinion, ought these conditions to have been accompanied by a specification? I think so; I should have had it.

64. Of what advantage would the specification have been? It would have stipulated exactly what the contractor would have had to do, and have defined the work he would have had to perform. Here is a printed form of contract used by the Commissioners of Sewers for the London districts (*producing a printed paper.*) The conditions commence after the specification, and there are several pages left in blank, to allow the Engineer to fill in a complete specification according to the work to be done. The general conditions may be the same, but as the work differs so the specification will vary, and these pages are left in blank to make such alterations.

65. From time to time as the work proceeds? No, at first, before the work has commenced; you cannot alter the conditions or specification afterwards.

66. Do you think, that instead of confining the schedule of prices to soil and rock, there ought to have been some provision made in the contract, the schedule, or the specification for ground of a mixed character? Yes.

67. That it ought to have defined what should have been the price for half rock and half soil, or two-thirds rock and one-third soil, or one-third rock and two-thirds soil, as the case might be? I only find three kinds of soil, the street metal, rock, and a mixture of clay and iron stone.

68. You think this ought to have been defined? Yes, every thing as well as soil and solid rock.

69. You think, as a preliminary, there ought to have been prices set out for soil of a mixed character? Yes; it would necessarily have been arranged, had there been preliminary openings made.

70. You think it would have been a necessary consequence of the thorough prior examination that ought to have taken place, that there would have been in the schedule prices for various kinds of ground as well as for rock and soil? Yes.

71. What ill results has the omission of these conditions led to in carrying out the contract? Only the settlement of the question after the commencement of the work instead of before, and the unfortunate business of the Engineer having put down rock instead of soil, but which does not appear to have been paid for. I do not know, however, that the City has suffered, as the matter has been settled tolerably fairly.

72. But you think it an unsatisfactory mode to settle such a question after payments had been made on account, and the quarterly accounts had been completed? I should not have liked it myself.

73. I understood you to say that if you had been Engineer at the time this work was entered upon, you would have made a prior thorough examination to ascertain the nature of the ground, to enable you to judge of the eligibility of the tenders and the nature of the work to be performed? Yes.

74. What construction do you put upon this condition of the contract:—"The contractor shall make out and deliver to the said Commissioners, at their office, in King-street, on the Wednesday of every week, an account of every work that is put in hand, whether the same is completed or not, and on every succeeding day correct duplicates, daily vouchers, or accounts, in writing, of each day and jobbing work executed on the preceding day, specifying, in detail, the quantities and measurements thereof upon a printed form to be furnished by the said Commissioners?" I consider, as I did in the first instance, that it was necessary to furnish the contractor with printed forms.

75. Have you reason to believe that, prior to your taking charge, that was done,—that the contractor was furnished with printed forms? I think not. Mr. Randle declared that he had not been, and the returns of the contractor which I found, daily and weekly, were in writing. It answered the purpose as well to get them in writing, and if written returns had been sent in I should not have exacted printed ones; but I had a great deal of trouble to get them when I came into office. The first weekly return sent in I checked, and discovered to be incorrect, and that was the last written one sent in. I insisted upon the right of these things

things being returned, and Mr. Randle objected, stating that he could only be required to send in returns, on printed forms, to be supplied by the Commissioners; before, therefore, I could insist upon having them I had to get some forms printed.

76. What is the nature of the information supplied by these daily and weekly vouchers? The daily return is for all jobbing work for which the contractor expects to receive extra pay.

77. Would not these daily accounts also include the contractor's estimate of the work done under his contract? That would be impossible; it takes nearly three days to take the measurements and make up the accounts. The daily returns refer merely to the day and jobbing work executed on the preceding day: now he gets paid for no day or jobbing work except what is beyond the contract, such as extra lights, extra boarding, &c., if necessary. The weekly accounts he used to return without any quantities or measurements whatever, and it was not necessary to return the measurements every week, because it takes so much time to measure that I found it almost impossible to exact it, I therefore demanded a return of quantities every fortnight.

78. Do I understand that you have required from the contractor, since you have taken charge, that he should furnish you with his measurement of the works executed by him during the fortnight? Yes. He arranges to pay his people once a fortnight, and I arrange to receive his accounts once a fortnight, as it would be inflicting a severe exaction to require them every week, besides which the contract does not insist upon his delivering quantities and measurements.

79. Do you not think it should have done so? If I had drawn that contract I should have stated fortnightly measurements, and should have exacted the measurements from him; but he stood upon his right, and I had no power to claim these measurements under the contract; but I consider that, whether it were stipulated in the contract or not, I was entitled to have an account before I gave a certificate that the work had been performed, and also that he was bound to do the work according to my order; I therefore insisted upon having this fortnightly account by virtue of my general power as Superintendent of the works.

80. Do you not consider it a business arrangement that a contractor shall furnish to the person with whom he contracts a weekly or fortnightly statement of the work he has done before he is entitled to receive payment? Yes, to limit his claim.

81. To commit him to that extent as to his charge for the work? Yes.

82. So that in the event of any dispute arising, as in the present case, the Commissioners would have had him committed to these certain charges? Yes; he could not then charge more than he had previously put down. If, for instance, he had put down anything in one fortnightly account which had been charged in the preceding account, it would have attracted attention.

83. If that course had been adopted, would not the Commissioners, as non-professional men, have been in a better position to have detected errors, supposing there had been any in the fortnightly statements upon which payments were made? If they went through these accounts, it would be difficult for them to check them.

84. They might have added up the amounts in money? Yes.

85. Do you not think the proper business arrangement would be to examine these accounts as to whether there was some correspondence between the money payments each fortnight? I think it was more the duty of the Engineer to get the papers in such order that they could not mistake. It always devolves upon the Engineer to get the accounts of the office in such order that any one in the office could understand them.

86. Supposing that duty to devolve upon the Engineer, do you think that those to whom the Engineer is responsible, as a matter of justification to themselves, should have examined the money statement to see that the amounts, from fortnight to fortnight, tallied with each other to some extent? I think some officer in the establishment should have been appointed to deal with it.

87. To guard against such errors as the charge for an item on the 8th November being less than the same item on the 25th of October, a fortnight before? If some one in the office had been appointed to keep a check upon the accounts of the Assistant Engineer, who measured the work as well as the Engineer himself, it would have given the Commissioners facilities for gaining knowledge as to the actual quantity of work.

88. It would have been a very useful check upon the operations of the contractor, and also a check upon the correctness of the Engineer? Yes; there does appear to have been a check of some kind, by appointing other persons in the office not connected with the sewerage, to make the quarterly measurements.

89. Not as regards the monetary portion of the business? Yes; to work out the prices of all the work. In the month of October measurements were taken to check the September account; and there appears to have been a general measurement on the 31st of December, with the same object. One of the assistants residing at Botany, who was employed upon the water works there, was required to come up here, at the instance of the Commissioners, to go through that measurement as a sort of check; but they all seemed to fall into the same error.

90. Then I understand you to say, that since you have taken charge you have insisted upon fortnightly accounts with the measurements, and that you have also insisted upon having these daily vouchers? Yes; but not the weekly accounts; instead of these we have the fortnightly statement, in which I require him to give the quantity of work executed.

91. Will you now turn to pages 140 and 141 of the General Report of the late Committee, and also to your own Report to the City Commissioners of the 28th March. Will you be kind enough to inform the Committee what course you adopt now with regard to measuring the works executed by the Commissioners? I altered the system of keeping the note-books, in the first instance.

92. By your assistants? By my assistants, who measure the work. I required that they should

Edward Bell, should be kept so that they could more easily check their own measurements, than appeared  
; Esq. to have been the case before. Their note-books previously were almost incomprehensible to  
any but themselves.

- 3 Dec., 1856. 93. They were kept in a kind of professional shorthand? Yes; so much was left to conjecture, and they did not check the measurements of one fortnight by those of another.
94. What course do you now adopt in regard to the preparation of your fortnightly certificates? We send out two assistants to measure, and they have their chain men with them, and instead of measuring with Mr Randle's men, which appears to have been the case before, I insisted that they should take their own measurements separately. Mr. Randle may send his men if he please, and, I believe, he has done so, to see the measurement taken; but I have given positive orders that our men shall hold the chain, not a tape, and that my people shall note down the measurement themselves, calling them out, so that Mr. Randle's people may check them. By this means I found that the measurements were more correctly taken; there were no mistakes afterwards, because a man cannot hold a chain wrong, he must put his hand in the ring; and although the measurement may be a foot or two out in rough ground, that is checked in future measurements as the work is completed.
95. This was all entered in the note-book by the Assistant Engineer, in such an intelligible manner, that yourself or any other professional man could check the measurements? Any man might do so, if it were tunnelling, because it would be paid for by the running foot; but if it were brickwork, it would require some considerable time to enable a non-professional man to take out the quantities.
96. The results of these measurements were entered in a note-book? Yes.
97. From that note-book the fortnightly certificates are compiled? Yes; a draft sheet is made from it.
98. Do you, before you sign that fortnightly certificate, satisfy yourself that the measurements tally with the entries in the note-book? Yes, and with the drawings; every fortnight's work is tinted on the drawings, and when I go through the work I know how far it ought to extend; so that I know myself, within a slight difference, the extent of work done.
99. You are satisfied that the course now taken ensures correctness? Yes.
100. Can you explain to the Committee in what respect the plan you adopt differs from your predecessors? Chiefly in the lineal measurement of the tunnel—they used to write down in their note-books what they considered done.
101. What they considered done? Yes; I suppose so. We now put down in our note-book the measurement of each fortnight against that of the previous fortnight, which is carried forward for that purpose; then, for instance, we deduct the admeasurement of to-day from the length taken a fortnight since, and the difference shews the length which has been done during the past fortnight. This is for the tunnelling, and shows distinctly, by three columns, the lineal measurement done between each shaft. The admeasurement of the brickwork is taken much in the same way as for the tunnelling. The running lengths of both finished and unfinished brickwork are taken, and the quantities given in rods of reduced brickwork. But what makes this very intricate is, as you may see from the plan, that the brickwork is very much broken, some parts being arched, while others have only the invert in progress, and the whole of the brickwork in each sewer is in detached portions, until each sewer is drawing towards completion that part under each shaft being finished last.
102. By the plan you now adopt, you think there is scarcely any possibility of an error even in the measurement of the brickwork? Not the slightest; if a man made a clerical error, it could only exist a fortnight.
103. When you came to compare one fortnight's work with the preceding, the error would be discovered? Yes.
104. Have you reason to believe that your predecessor did not take the precaution you now take in carrying on the measurements? Yes. The system was different; Mr. Randle's men took hold of one end of the tape, and the other end was held by the Commissioners' people.
105. The measurements were a kind of conjoint measurement? Yes.
106. Partly made by the Engineer's men, and partly by the men acting under Mr. Randle? Yes.
107. You found generally that these measurements were not correct? I attribute the errors to that. I cannot tell whether the Engineer went down with the men, but no man in a sewer can hold one end of a tape sixty-six feet long, and tell whether the man at the other end is holding the tape right.
108. You consider it absolutely essential to secure the correctness of your measurements, that some men in your employ shall hold the chain? Yes; that they shall use the chain, and measure nothing but short lengths with the tape; that renders it impossible to make any serious error.
109. By Mr. Lang: During the time this old system was continued under Mr. Rider, were these errors material ones? Yes.
110. By the Chairman: As I understand you, you at first allowed this system to continue? The first measurement made after my taking office.
111. You made on the plan previously adopted? I said I should not interfere in any way, but that I was coming to see how the measurement was conducted.
112. And you found the City Engineer's and Mr. Randle's men making the measurement unanimately? Yes; one held one end of the tape, and the other the opposite end of the tape.
113. And you found the measurement made under that plan, while you were supervising it, was erroneous? It was certainly not correct.
114. And in order to ensure correctness you thenceforth altered the system, and had all the measurements on your own account made entirely by your own people? Yes.
115. As I understand you, no other system could properly have been adopted? That is the right system.

116. *By Mr. Lang*: My question is, whether the variation in the measurement was of such an extent that you would think it had arisen from mere error in carrying out the measurement, or that it was designed for the purpose of getting larger payments? It is difficult for me to tell the object. Edward Bell,  
Esq.  
3 Dec., 1856.
117. What was the extent? Not very great; it was all checked in the next fortnight.
118. *By Mr. Scott*: Checked by whom? By me. I cannot tell to what extent, for I found there was an error, from so little work having been done at the end of the next fortnight, when I made the measurement. The first measurement I made was on the 3rd of March.
119. *By the Chairman*: Allow me now to direct your attention to the measurement in Macquarie-street, as stated in page 141 of the General Report, dated 25th October, 1855, and to your own measurement of the same street on the 31st March, 1856. Taking the first item, for "driving in rock," you will find that, on the 25th of October, there was charged 2,903 feet, charged £11,612, while according to your measurement on the 31st March there is charged only 2,743 feet lineal tunnelling in rock, at a charge of £10,972. How do you account for so material a difference between the measurements of the 25th of October and of the 31st March? I cannot account for that; I cannot conceive that it was measured.
120. *By Mr. Scott*: Perhaps it was from one of Mr. Rider's men holding one end of the tape, and one of the contractor's men holding the other? I cannot say.
121. *By the Chairman*: Then I understand that you cannot account for this error? No.
122. Will you be kind enough to turn to the two or three preceding certificates of measurement. On the 13th of September, at page 138, you will find there is a charge for 2,903 feet driving in rock; the same quantity is charged there as on the 25th of October. Then on the 27th September the same quantity is charged? Yes.
123. Then on the 11th October? 2,903 feet again.
124. Again on the 25th of October? 2,903 feet is again charged.
125. Can you in any way account for these errors appearing and reappearing in three or four fortnightly certificates? No, I cannot; and I have not been able to arrive at any explanation from anybody as to how it was possible.
126. As a professional man, you cannot understand how this error could have been made, and repeated fortnight after fortnight? I cannot.
127. Will you now turn to the measurement of the 8th of November, which appears to have been made with more care than was previously exercised; you will find there that 2,727 feet driving in rock is charged for, which, I presume, is something near correct, as compared with your own measurement of 31st of March? There is a difference of 16 feet.
128. That is 16 feet less charged on the 8th of November than on the 31st of March? Yes.
129. Have you reason to know whether there was any driving in rock between the 8th of November and the 31st of March? No, I know nothing of that.
130. Then the measurement that took place on the 8th of November was pretty near the mark, as far as driving in rock was concerned? I think it will be found that there were about 45 feet more length done than was charged for on the 8th of November. I discovered in that street 45 feet run of work done which had never been measured up. That 45 feet, if the work had been measured carefully, must have appeared before.
131. I understand that the mode adopted by the Commissioners of paying on account was on these certificates, furnished every fortnight by the City Engineer? I suppose so, by the terms of the contract.
132. Supposing that, on the 13th of September, the Commissioners had paid ninety per cent. of this £11,612, among other items, they would have paid on that particular item a greater sum than the total amount that should have been paid on the 31st of March for the same work? Yes.
133. I will now call your attention to the charges for brickwork in the same street. If you direct your attention to the charge in the certificate of the 25th October, you will find that there was certified 131 rods 94 feet, at a cost of £5,514 18s. ? Yes.
134. In your own quarterly measurement of the 31st of March, that is rather more than five months afterwards, you certify that the quantity of work is 91 rods of brickwork and some odd fractions, at a charge of £3,856 10s. 8d. ? Yes.
135. Shewing a difference of £1,658 7s. 4d. in the brickwork certified on the 25th of October over and above what was found to be chargeable by you on the 31st of March? Yes.
136. How do you account for an excess of that amount? I am sure I cannot say. The real amount of brickwork in Macquarie-street is 85 rods 44 feet, amounting to £3,576 15s. 10d., diminishing the account by 5 rods. That which was put down as 14-inch was 9-inch.
137. So that the actual excess amounts now to £1,938 2s. 2d. ? Yes.
138. How has this overcharge arisen, can you explain. Is there a greater length charged for than has been executed, or is it owing to 9-inch work having been charged as 14? This last reduction is solely attributable to the difference between 9 and 14.
139. How does the aggregate difference arise? The other was an excess in length, I believe. I have not the details here. On looking at the certificates I find the error chiefly consisted in charging 14-inch work where 9-inch existed.
140. *By Mr. Wilshere*: It was certified as 14-inch brickwork? Yes; it was written on the drawings that it was to be 14-inch work, and the note-book shews 14-inch work.
141. *By the Chairman*: Whereas you find it all to be 9-inch? Yes.
142. What did you find to be the actual amount of the work which had been certified to be 131 rods? 85 rods 44 feet, altogether. There is no 14-inch work in Macquarie-street at all, except underneath where the shafts were sunk, and I found in this place 27 feet of crown 14-inch, but no invert 14-inch. The upper part had three rings, but the lower only two.
143. Excepting at these particular places, you found that all the brickwork charged as 14-inch was 9-inch? Yes, excepting under the shafts, and where there were 27 feet lineal of arching.

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144. Can you, as a professional man, understand how a gross error of this kind could have been made, and repeated, fortnight after fortnight, by any professional man? No; I cannot understand how it could have taken place once.
145. Supposing that, through some error or accident, it had taken place once, can you understand how it could have been repeated time after time? No. It seems gradually to have come to its growth of 131 rods.
146. Supposing one of your Assistant Engineers brought you up a certificate of this kind, could you, having had charge of the work from the commencement, have passed it without detecting a material error of that kind? No, I could not, if I had visited the works at all.
147. If you had paid any thing like proper professional attention? Only moderate attention.
148. You cannot account for a material error of this kind in any way: 131 rods of 14-inch brickwork being charged, whereas there were only 85 rods of 9-inch brickwork, according to the last examination? No.
149. You are not able to assist the Committee with any conjecture as to how the error might have arisen? No, I am not; no false holding of the tape, or mistake in the calculation, could account for it. I rather think Mr. Randle was under the impression that it was 14-inch, and that he paid his people for it as 14-inch; but that did not appear in our accounts.
150. I will again direct your attention to page 141. You will there find that, in Macquarie-street, there are 481 junctions charged for at a cost of £312? Yes.
151. In your quarterly measurement of the 31st of March I find no junctions charged for in that street, but 57 collars? Yes, collars to receive pipes.
152. How is it possible that these junctions could have been charged for at that time, and repeated again on the 8th November, although at a less cost. How is it possible these junctions could have been charged for when they were not in existence? There really exists one junction, and there are fifty-six collars; how that error could have occurred it is impossible for me to tell.
153. If you add up the total charge as certified for in Macquarie-street, on the 25th October, you will find the sum to be £18,703 15s.? Yes.
154. Turning to your charge for the same street, on the 31st March, 1856, I find the total to be £15,242 10s. 11d., shewing the difference thus certified to by you on the 31st of March, as compared with the certificates furnished by the Engineer, of £3,461 4s. 1d.? Yes.
155. So that if your measurements were correct on the 31st March, and I suppose you have no doubt they were correct —? They were correct, so far as I was able to discover.
156. That measurement shews there was certified for in regard to that one street, on the 25th October last, an excess of £3,461 4s. 1d.? Yes, it appears so.
157. Can you suggest any way in which a professional man could possibly have arrived at this charge? No, it is quite impossible for me to account for it.
158. Assuming the possibility of making an error in some one of these chief items, and that that should have been overlooked by the Chief Engineer in making his quarterly measurements, is it conceivable that the error should have been made in three chief items without such error being discovered. Granting that it might have occurred in one, can you reasonably grant that it could have occurred in three? They had the same means of discovering them that I had, and I found no difficulty in discovering them; it wanted time, of course, to discover some.
159. *By Mr. Egan*: It would not require much time, I suppose, to discover the difference between nine and fourteen? It required time for me to discover some, because there was water in the sewers. Where I had doubts I had the sewers re-opened.
160. *By the Chairman*: Will you turn to page 72 of the Final Report. Mr. Mais, who carried out most of these measurements, is examined with reference to this matter. He is asked by the Chairman, *Question 41*, "When you certify that one hundred rods of brickwork have been performed, does that give you notice of the length or thickness of the brickwork?" Mr. Mais says, "It gives the thickness, because it is stated in the certificate whether it is nine-inch or fourteen inch work—so many rods of nine-inch work, and so many rods of fourteen-inch work. Will you undertake to say that it is so? I am certain that it is; I write out the certificates. There can be no mistake about it? I am sure of it. In every case where you give measurements of brickwork, you state whether it is nine-inch or any other thickness? Yes. There are two columns ruled in the certificate, and headed respectively nine-inch work and fourteen-inch work, so many rods, so many feet." This evidence, you will observe, was given on the 4th of October, and his attention had previously, in the 36th question, been called to Macquarie-street. The Chairman says:—"Take the case of Macquarie-street. Many of the shafts have been filled up, and somewhere about a quarter of a mile of the sewer completed. How is it possible for any person going inside that sewer and examining it, to tell whether at any part it is formed of two, three, or five rings of bricks?" Mr. Mais says:—"Any person going between any two shafts could not tell unless he opened it, but the person in charge at the time would know the quantity." Looking to the examination of Mr. Mais on the 4th October, and the reference to this measurement of brickwork in Macquarie-street, can you conceive that Mr. Mais would again have given a certificate on the 25th of October, in reference to this brickwork in Macquarie-street, without having satisfied himself that the charges he was certifying to as correct were actually correct? He gives his evidence on the 4th of October.
161. And his certificate three weeks after his examination took place? I cannot understand it.
162. Can you understand how any professional man, after such an examination as that, calling his attention specially to the measurement of the brickwork, could certify on the 25th of October, that there were 131 rods of brickwork, while on the 31st of March you found the quantity to be 91 rods? I examined Mr. Mais on the subject, (for he was in the office some time after I joined it,) and he attributed the error to the circumstance that he

was then attending and undergoing his examination before the Committee, and said, when he was not before the Committee, he was in such a state of excitement that he could not attend to his duty. That is the only reason he assigned.

163. Do you think that a sufficient reason for his certifying to so much in excess for the brickwork, the driving, and the junctions? If I could not have attended to the business I would not have put anything down.

164. At any rate he ought not to have exceeded what he knew to be right? No.

165. Would not the prudent course have been to have certified to something a little lower, seeing that no injustice would then have been done, as Mr. Randle could have corrected it afterwards? Yes, if the contractor had wanted the money, he could easily have proved the work was there, without much trouble.

166. Then, as a professional man, you cannot account for this gross overcharge on these three separate items, and on the gross amount of the sewer in Macquarie-street? No.

167. In the course of your measurements in the sewers in the other streets, have you observed any discrepancies between the actual quantities of the work executed and the amount certified for under your predecessor's direction? I think there was some difference in Pitt or Phillip-street.

168. I will call your attention to the amount for driving in rock in Pitt-street, on the 27th of September. You will find on page 139, that there was certified to, as for driving in rock in Pitt-street, 3,577 feet, at a charge of £16,096 10s.; and then, if you turn to page 142 in the certificate of the 8th of November, you will find that the amount of rock certified to is 3,097, at a charge of £13,936 10s., being upwards of £2,000 less than had been certified to on the 27th September, six weeks before? Yes.

169. If you turn to your quarterly measurement of the 31st March, you will find charged for driving in rock, in Pitt-street, 2,771 feet, at a charge of £12,470 5s.? Yes; there is a great error in that, inasmuch as it should be 2,790 feet.

170. That is what you certified to on the 31st March? Yes. I kept that at the very lowest, but since then I have had more opportunity of examining the work, and 2,790 seems to be fair. Of course, I can only gather from the information of my officers, what was actually done by open cutting and what by tunnelling.

171. So that the amount certified to on the 27th of September is in excess of the amount you certified to on the 31st March, £3,626 5s.? Yes.

172. Taking the measurement as certified to by Mr. Mais and Mr. Rider, on the 27th September, and your own measurement as certified to on the 31st of March, you will find the difference for the charge of driving in rock in Pitt-street, amounts to £3,626 5s.? Yes.

173. Since then you have found twenty feet driving in rock more than you allowed? Yes.

174. Making a total charge for driving in rock, in Pitt-street, ———? The difference is £3,540 15s., in comparison with my October measurement.

175. That is your October measurement of this year? Yes.

176. So that you find, thirteen months after this measurement has been made, that the proper charge for driving in rock, in Pitt-street, is £3,540 15s. less than the Engineer certified to in September, 1855? Yes; I found that out before the 4th of July.

177. Can you account to the Committee, or suggest to the Committee any mode of accounting, for this enormous discrepancy in this one item? None whatever, excepting to the extent of about eight or nine hundred pounds, which would have to be deducted in consequence of the decision of the Commissioners to pay for the mixed material in this street as two-thirds rock and one-third soil; as this decision was made after the signing of the quarterly account for December, 1855, it did not appear in the certificates until my 31st of March, 1856, certificate.

178. Can you conceive how any competent professional man could make and repeat such an error? A competent, professional man, who attended to his business, could not make and repeat such an error; it is not possible.

179. Are there any other discrepancies you can point out to the Committee, besides those to which I have drawn your attention, in Macquarie and Pitt Streets? The amount, on the 31st of March, 1856, set down in my return for tunnelling in rock, was £10,972; the amount for October the 1st, 1856, was £10,182 13s. 4d., shewing a difference of £789 6s. 8d. From this we must deduct £478 16s., allowed for 252 feet of tunnelling in soil.

180. So that, as I understand, what you certified to on the 31st March, as costing £10,972 4s., you found, on the 1st of October, to amount to £10,661 9s. 4d.? Yes.

181. My question had reference more immediately to the comparative charges certified to by your predecessor, and those you have now found to be correct. Are there, in any other streets through which the sewers have been conducted, or in the main sewer, any such perceptible excesses in the charges previously certified to, as those to which you have alluded in Macquarie-street.—I think you named Pitt and Phillip Streets? I do not recollect anything in Phillip-street. I do not recollect anything else.

182. You do not think the same excesses exist with regard to other charges as you have pointed out with regard to the sewers in Macquarie-street? I do not recollect. These corrections were made in March, April, or May last, and since then they have been quite out of my mind.

183. I am now desirous of examining you with regard to the excavations for carrying on the sewerage works. Will you please to inform the Committee on what principle you now determine whether you shall open cut or tunnel—what are the considerations that induce you to determine? The chief one is, which will be the cheapest; in some instances, I have deviated from that, where we have had to go through the dense part of a street and have to excavate in rock, where we cannot do it without gunpowder. In such cases, of course, great danger would arise from the attempt to carry on the work by open cutting, from pieces of stone flying upwards, which not only endanger property, but life. There is an instance to which I may refer, opposite to Mr. Lenehan's house in Castlereagh-street. In consequence of the

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Edward (Bell), the dangerous state in which that house stands, I at first ordered excavation without gunpowder, but I did not think I could stand upon the right of preventing the use of gunpowder to the contractor, I, therefore, allowed him to proceed by tunnelling, and to use powder in small charges, and in this way we passed the house. My great object here was to avoid damage to this house, which would have caused a large expense, had the sewerage works been so conducted in that locality as to afford any grounds for compensation to the owner of the house. Then there is another part of Castlereagh-street, where the population is dense, and where a number of doctors reside, whose business require that their doors should be kept free; I allowed the work to be performed there by tunnel. These are the only exceptions; the upper and lower parts of Castlereagh-street, where there are not many houses, are open cutting. Some very large stones were thrown into the warehouses at the lower end, but that arose from carelessness, and the men to blame were removed, of course. I believe in all sewerage works tunnelling is the exception, and excavation is the rule. I always consult cheapness, the convenience to the public in some respects, and the stoppage to business is considered as far as possible.

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184. What is the relative cost of the different modes of carrying out sewerage work generally in No. 1 section, in which you are now engaged? I have not made a general estimate of that; but, as far as I estimated it for some streets, I think the difference between tunnelling and excavation would be about one to three.
185. That is to say, that the cost of tunnelling would be about three times as great as the cost of excavation? I think so; I think I am within bounds when I say three to one, taking the works generally.
186. You conceive that the only cases that justify recourse to tunnelling are where the excavations are through rock, and it is dangerous to life and property to open cut, and where again it will interfere very seriously with the amount of traffic? Yes, and besides as regards the houses on the line, it would be a very serious consideration whether we ought to deprive persons of the use of their doors. I conceive that, in part of Pitt-street, where the sewer is tolerably deep, (from 23 to 25 feet,) we should be perfectly justified if there were any rock at all, or almost without any rock, to carry that through tunnelling. I doubt whether tunnelling in soil there would be attended with much greater expense, owing to the depth, than excavation. At any rate, the additional expense would be so slight that in that case I would not subject the householders to the inconvenience of open cutting.
187. Where the sewers do not run to so great a depth, excavation would be much cheaper than tunnelling? Yes, decidedly.
188. Which plan is the most favorable for proper excavation? The best executed work would be by open cutting, and for that reason tunnelling is always the exception.
189. Almost invariably the work, could be executed better in open cutting than in tunnelling? Yes, and they could be better supervised.
190. Having reference to the execution of the work, open cutting would be preferable if you could open cut without danger to life or property, or the rights of persons on the line? No contractor is allowed to tunnel without a special order.
191. Can you state to the Committee the comparative cost of tunnelling in rock and open cutting, at the average depth the sewers run? I took out the length of Pitt-street before I came up here, and I think the excavation there, from Hunter to Bathurst Streets, would have cost about £3,900, if it had been open cut, judging from the character of the soil returned in the books.
192. What has been the cost of tunnelling? Over £13,000.
193. So that if, consistently with the safety of life and property in Pitt-street, and also with the fair rights of the people who reside there, open cutting could have been adopted in Pitt-street instead of tunnelling, there would have been a saving of £7,000 or £8,000? Yes.
194. In addition to that, the works, in all probability, would have been better executed, or, at all events, there would have been the means of securing better execution? There would have been better supervision.
195. Supposing you had been here at the time these works were carried on, and in the possession of the knowledge you would have felt bound to have possessed yourself of, would you have adopted a tunnel along the length of Pitt-street from Hunter to Bathurst-street? I would not, setting aside the question of obstruction to business, which I consider ought to be settled by the Commissioners.
196. What course would you, as Engineer, have been prepared to recommend? I should have been inclined to have given way in that deep part of Pitt-street, from Hunter-street to King or Market-street, there I think I would have had tunnelling, but the other I would have done in open cutting, certainly.
197. There would have been a material saving in carrying out the work by open cutting between Market or King-street and Bathurst-street? Yes.
198. *By Mr. Lang*: You speak entirely as to the difference of expense, not taking the traffic or the convenience of the public into consideration—you speak solely as an Engineer? Yes; leaving the question of inconvenience to the public to the Commissioners; the Commissioners would look to me for information as to the obstruction, and I would include that in my recommendation.
199. *By the Chairman*: It should be their duty to decide what course should be adopted with reference to the obstruction to business? Yes.
200. Your duty is to recommend the course you believe to be the cheapest, and the most conducive to the proper execution of the work? Yes. I should have adopted the cheapest course myself, and where I saw occasion to deviate from that, I should have submitted the matter to the Commissioners to sanction the course. They, of course, ask my opinion, and I recommend accordingly; but it is for them to decide whether exceptions like these are made, whether the expense shall be gone to.
201. That is as regards the convenience of the public, and as affecting life and property? Yes.



202. Taking the sewers in the other streets, for instance, say Castlereagh-street, would you have been prepared to have had recourse to open cutting there more than your predecessor has done? Yes, that I should have done in open cutting. Edward Bell, Esq.
203. From what part? From Market-street. 697 feet I should have recommended to have been done in open cutting. 3 Dec., 1856.
204. You would have recommended that that portion of Castlereagh-street between Market and Bathurst Streets, which has been tunnelled, should have been open cutting? Yes; I should have done that as a matter of course.
205. *By Mr. Egan*: You have done it since you took charge? Between Park and Market Streets.
206. *By the Chairman*: There are no other portions of Castlereagh-street which have been tunnelled which you would have recommended to have been open cut? No; I do not think, under the circumstances, I would.
207. As regards the tunnelling between Park and Bathurst Streets, you would have been prepared to recommend open cutting? Yes.
208. *By Mr. Lang*: You speak independently of the traffic? Yes; I should have kept one side of the road open, and thrown the earth on the other side.
209. *By the Chairman*: What would have been the difference in the cost of open cutting and tunnelling in those parts where you think you would have had recourse to open cutting? I have prepared a Return shewing how much of that which has been done as tunnelling I would have carried out as open cutting, and the difference of cost. (*The witness handed in the same. Vide Appendix C.*)
210. How do you now determine the charges for ground worked through of a mixed character, that is to say, part rock and part soil? For mixed soil, when it is done in tunnel, the heavier or more stony part being the lower portion, two-thirds rock and one of soil is charged; but when that material is excavated in open cutting, the price of half rock and half soil is allowed for it. Of course that does not include the soil on the surface of the mixed material.
211. Do you know how your predecessor determined these charges? No; I see nothing in his returns but rock. He certified in his December measurement to rock, and the Commissioners altered it. I noted in my instruction book that the Commissioners had altered that, and had taken upon themselves to determine that question. I suspect the alteration was made almost at the time the entry of the December certificate was made in the book.
212. You were a member of the Board appointed by the Governor General to inspect these various works in connexion with the City Sewerage, and to make a report? Yes.
213. Were you satisfied that the charges for rock and soil were correct? We did not examine the books.
214. You did not go into that question? No; the only things we saw in the office were the sections.
215. Then the Board did not feel called upon to go into the question whether the charges for rock or soil were correct? They went into that question of rock and soil; and, if I remember, they did decide that the arrangement come to by the City Commissioners was the best that could be arrived at—the fairest that could be made under the circumstances.
216. In their Report I observe that the Board say,—“The character of the excavation—whether stone, or earth, &c., we have carefully examined into. Throughout the greater portion of the works the ground on the surface is composed of soil, whilst the substratum is compact sandstone rock. In Elizabeth, Castlereagh, and Pitt Streets North, we find the ground composed of other materials, so mixed and varied in their character, that they cannot be described either as rock or soil. We have adopted the best means in our power to form an equitable opinion upon this subject, by having pits sunk in these various places, close beside the sewer, and to the full depth of them, in order to judge the nature of the ground and the difficulty of excavating. We found from five feet under the surface to be of loam; below this it is hard and unyielding, consisting partly of veins and nodules of ironstone, pebbles, &c., and intersected with thick strata of a very tenacious description of pipeclay, very compact, and nearly as difficult to work as rock. It is therefore clear that this mixed ground cannot be classed under the head of rock or soil, and as there is no price in the Schedule for working in any other material, the only alternative to adopt was the course usual in all cases where the works vary from those specified,—to pay for it by a price analogous to that named for the nearest description of work in the Schedule.” And then they go on to describe the different kinds of ground they found in the various sewers, and to specify the charges they think those sewers will correctly bear; but they do not, apparently, enter into the question whether the correct charges had been made or not? No.
217. Were they unable to do that? I do not consider that they had any authority to go to the Commissioners' office to see the books.
218. They only felt called upon to certify what would be about the right charges for these different descriptions of soil? Yes. I think this was one of the points to which their attention was specially directed under the Government instructions.
219. They considered that they were simply called upon to certify generally as to the character of the ground in which the works were carried on, but not to ascertain whether the charges were correct, according to the decision of the character of the soil? No, they were not instructed to do so, and they did not think their instructions warranted them.
220. Have you had occasion to direct your attention to that point since you have been City Engineer? Yes.
221. Are you satisfied that the charges certified to by Mr. Rider were correct? No; I said before that he had certified all rock, and Mr. Randle claimed all rock, where these nodules of ironstone were met with; and it was decided by the Commissioners that the

- Edward Bell, Esq., payments should be only for two-thirds rock and one-third soil, where there was tunnelling, and half rock and half soil where there was excavation.
- 3 Dec., 1856. 222. Have the Commissioners acted upon their opinion? Yes, upon their own opinion; and it was inserted in the instruction book, in January, before I entered the office.
223. Has this led to any material variation in the sums paid to Mr. Randle for these works under the contract? It makes a difference in Mr. Randle's certificate of December the 31st, of about one thousand and eight pounds.
224. To what amount? Not a very great amount. At the time this certificate was made out, the decision of the Commissioners was arrived at. Mr. Rider was strongly of opinion that it should be paid as rock, when Mr. Randle's half-yearly account came in.
225. But it had been paid for on account as if it were rock? I only remember the December account containing those items.
226. You are satisfied that the course the Commissioners have ultimately taken, in paying for these excavations of a mixed character, is the correct one? I think it is very fair.
227. Have you felt yourself called upon to require the contractor to alter or amend any of the work he has executed? Alterations in the brickwork occur in small quantities. I do not remember any particular large quantities. It used frequently to happen, when he had another overseer there, that he had to take up the brickwork in small quantities.
228. My question has reference more particularly to any works he had completed before you took charge? Yes; all the rendering had to be correctly done.
229. You considered it defective? Yes, Macquarie-street.
230. And you called upon the contractor to make it good? Yes, in Macquarie-street, as far as the Treasury, or a little below, has been done; it has been done in Phillip-street; and all, except some little distance, at the lower end of Castlereagh-street. All the new rendering is not yet done in Pitt-street.
231. He has been called upon to do, and will do, all the corrections necessary in regard to the rendering? Yes.
232. Did you call upon him to make good any defects in other respects than as regards rendering? Yes, the mis-driving, as it is called, of the main tunnel, which he had to correct at his own expense.
233. You mean by mis-driving that the straight line was not kept? Yes; there is a curve down by the Water Police Office, and also between 3 and 4 shafts, and he had not kept the correct line; we called upon him to make the proper curve.
234. Which he has done at his own cost? Which he has done at his own cost.
235. Did this error occur before you took charge of the works? Yes, the error existed before I came.
236. On taking charge of the works you called upon him to make this correct? Yes, to make a perfect curve. I gave him a larger radius, to save him as much expense as possible, and to give us a better curve.
237. *By Mr. Egan:* Had there not been an attempt to remedy that defect by taking the sewer across here—(pointing to the plan)—instead of coming between here by the proper curve? When I ordered that to be done they said there was to be an S curve, which I would not approve. They said it was ordered by Mr. Rider, but of course I would not allow it.
238. *By Mr. Scott:* Had Mr. Rider allowed it? So they said.
239. *By the Chairman:* What are the means you at present adopt of supervising the work, and of ensuring the use of proper materials? I have a man constantly standing over the mortar board, as an inspector, to see that the mortar is properly mixed, and to see that proper bricks are used. If a bad brick is sent down, it is not his business to stop the work, but to report the circumstance; if such a thing occurs a second time, without being reported, the man is dismissed.
240. *By Mr. Lang:* That is your own inspector? Yes. Then there are the assistants, who have to measure; they are continually through the works, and anything they observe they have to report. I also go round frequently, and see the works.
241. *By the Chairman:* Have you reason to believe that the means taken by you for supervision are sufficient to ensure the good quality of the material, and the faithfulness of the work? Yes.
242. Is it possible, under the present system, to put down a three-brick ring instead of a two-brick? I never put any three-brick rings.
243. Do you know what means were taken by your predecessor to secure the same object? No, I do not.
244. Have you reason to believe that they were as effectual as they are now? I do not think the men were as sharply looked after. The men who suited him would not suit me; they did not appear to attend to their business properly.
245. Will you state to the Committee what is the state of the works under Mr. Randle's contract under section No. 1,—how much is completed, and how much remains to be completed? (The witness handed in a Return. Vide Appendix.) It is drawing to a close very rapidly; he has to finish perhaps sixty or seventy feet of driving in Castlereagh-street, and has also eight or nine hundred feet of brickwork to do there; he has also to cut a chase under the brickwork in Elizabeth-street, from one end to the other. This chase allows the water to run off at the bottom of the drain, without percolating through the brickwork, and thus facilitates the rendering.
246. The want of this previously has caused part of the defects in the rendering? Yes.
247. In regard to other streets, what is there to be completed? Very little. There is a little piece at the end of Phillip-street, to make a connection with the main sewer, and there is also a little piece of open cutting in the same street, where the Infirmary drain crosses; but that cannot be done until we can make a connection with the Infirmary drain in Macquarie-street.

248. When do you estimate that the contract will be completed? About the first or second <sup>Edward Bell,</sup> week in January. <sub>Esq.</sub>
249. Will you state to the Committee what the entire cost of the works in section No. 1 will be, when completed? £119,422 6s. 6d.; that is under Mr Randle's contract. There is besides this a back drain in Phillip-street, in section No. 1, not included in the contract, which will cost about £750. The outlet to the main sewer, (sec. No. 1) will cost about £4,000; that is the outlet from the face of the tunnel to the sea. 3 Dec., 1866.
250. That is a distinct contract? Yes, that is a contract by the lump, and is not included in Mr. Randle's.
251. You are aware that Mr. Rider's estimate of the probable cost of these works was £54,000? That is an analysis, and may be looked upon as the estimate of Mr. Rider, but I do not remember what estimate was put forward by him to the Commissioners.
252. His original estimate was £65,490, his estimate under Mr. Randle's contract was £54,870, and the actual cost you find to be between £119,000 and £120,000? Yes.
253. To what causes is it owing that the actual cost has been so largely in excess of Mr. Rider's estimate? It is difficult for me to find out how Mr. Rider formed his estimate of £54,000. I can only conceive that he estimated for a great deal more open cutting than he ordered to be done, or than actually took place.
254. You will find, on referring to page 21 of the Final Report, that he gives the quantity of excavation in rock and soil? Yes; but the amount put down for tunnelling in rock bears no proportion to the amount of tunnelling done. In the estimate we have 3,780 feet put down for Pitt-street, as "total length in soil." I suspect Pitt-street must be longer than that; I make it 3,966 feet.
255. Judging from the Engineer's estimate, he appears to have calculated, that except the tunnel for the main sewer, all the rest would have been by open cutting? Yes; in every sewer, excepting 1,320 lineal feet tunnelling in rock in the main sewer, all the excavation was to have been done by open cutting; I cannot find that tunnelling was contemplated elsewhere.
256. You account for the excess mainly by a very large portion of the work having been done by tunnelling, whereas he contemplated nearly all the work being done by open cutting? Yes.
257. You think it was also owing to his having a much larger portion of the ground charged as rock than he originally estimated? Yes; all Pitt-street is estimated by Mr. Rider as excavation in soil, and the greater part was executed as tunnelling in rock.
258. I wish further to ask as to the general character of the works as they now stand, whether you think, on the whole, the quality of the material used has been good, the workmanship good, and the works as a whole sufficiently sound? I think, upon the whole, they are very substantial sewers. They are so substantial, that I do not put in any 14-inch brickwork. They are better than any sewers you meet in almost any place.
259. You consider that whatever errors may have occurred in the mode of carrying out the works, as now executed they are satisfactory, thoroughly substantial, and thoroughly sound? Yes, so far as they have gone.
260. Therefore, although more money may have been paid than would have been paid if the works had been under your own management, the character of the works is in no way to be complained of? I do not know of anything, after the errors I have mentioned have been corrected.
261. *By Mr. Egan:* Which you discovered when you took charge, on examining the character of the works? I consider that when we cover the crown of the Pitt-street sewer, where drains cross it, and complete the rendering of Pitt-street, they will be as perfect sewers as any city could desire to have. No doubt they are expensive, but that must be so where all labor is expensive. All I wish is, that as the soil is so moist, there had been sub-drains to carry off the water.
262. *By the Chairman:* Having examined the sewers thoroughly yourself, you are prepared to say that they have been constructed, as regards durability, the quality of materials, and the soundness of the workmanship, in a thoroughly satisfactory way? Yes; excepting that I think a chase through the stone, and a pipe through the soil under the sewers, would tend to their durability; but I believe they will last almost for ever, or at least as long as the old masonry of Roman works, which we still find in a good state of preservation, while making excavations at the present day in England and other countries where their works abound.

## APPENDIX A.

## LIST OF DRAWINGS—ENGINEER'S DEPARTMENT.

Section of Main Sewer—Mr. Orford has one.	} Copies of these—some copies some tracings—for working drawings.
Ditto Pitt-street.	
Ditto Bridge-street, and plan on it	
Ditto Elizabeth-street.	
Ditto Castlereagh-street.	
Ditto Phillip-street, and plan.	
Ditto Macquarie-street, and plan.	
Ditto Hunter-street, and plan.	
Ditto King-street, plan and section.	
Ditto Market-street.	
Ditto Park-street.	
Ditto Bathurst-street.	
Plans and sections of junctions for Bridge, Hunter, (King, Market, and Park, all one street) Streets.	Plan

Edward Bell,  
Esq.

3 Dec., 1856.

Plan and section of junction for cross streets.

Sections of different sized sewers, shewing construction, with radiated bricks.

Elevation and section of cast-iron sewer for Fort Macquarie. One.

Drawing of section No. 1 to accompany report.

Ditto ditto No. ditto.

Copy of list of drawings prepaid by Mr. Mais, and delivered to Mr. Bell on his taking office as City Engineer.

Trial Section of Goulburn-street.  
" Campbell-street.  
" South Head Road.  
" Burton-street.  
" Liverpool-street.  
" Francis-street.  
" Stanley-street.  
" William-street.  
" Woolloomooloo-street.  
" Albion-street.  
" Botany-street.  
" Victoria-street.  
" Brougham-street.  
" Dowling-street.  
" McLeay-street.  
" Wylde-street.  
" Darlinghurst-street.  
" Forbes-street.  
" Bourke-street.  
" Crown-street.  
" Riley-street North.  
" Riley-street South.  
" Palmer-street.  
" Yurong-street.  
" Charles-street.  
" Anne-street.  
" Gipps-street.  
" Bathurst-street, West.  
" Market-street, "  
" King-street, "  
" Druitt-street, "

Plans, shewing Government and Corporation drains of—

Phillip Ward.  
Bourke Ward.  
Cook Ward.  
Brisbane Ward.  
Gipps Ward.  
Macquarie Ward.

4 plans and sections of man-holes, gullies, junctions, gratings and syphons.

Tracing of 30 inch main for Sydney Water Works.

Plan of Reservoir at Lachlan Water Works.

Sketch for Fountain, Hyde Park.

2 designs for Botany Water Work's Engines.

Botany { Elevation and section of Engines for Water Works as per contract.

Plan of Stand Pipes and Engine-house.

1 do. do. do. do.

1 do. do.

6 drawings of Water Pipes branches, &c.

Drawings of 30 inch main.

2 drawings of locks for do.

1 drawing of Water Tank, Lachlan Swamp.

2 " of cast iron Water Pipes

Botany Detail drawings of Stand Pipes.

Sketch plan, shewing reservoirs and filters.

Section of filter.

Do. of Dam Wall.

Elevation and section of Sluice-houses.

Plan and section of Water Course.

2 drawings of Machinery for raising sluices.

Drawing, shewing section of cutting and embankment of Reservoirs.

Botany Sheets of cross sections of Reservoirs.

Plan, shewing proposed improvement to Wharf at Pennant Hills.

Plan and section of proposed Weigh Bridge for Haymarket.

Contract plan and section of Lime-street Wharf.

Do. do. do. as proposed to be completed.

Contract plan and section of Market Wharf.

Plan of wharf at Soldiers' Point.

Plan and section of drains for Wynyard-lane.

Plan of proposed baths at Woolloomooloo Bay.

Langley's plan and section from Lord's Mill to the Water-plug, Hyde Park

E. BELL, C.E.,

4 December, 1856.

LIST

LIST OF INSTRUMENTS, &c., ENGINEER'S DEPARTMENT.

Edward Bell, Esq.  
3 Dec., 1856.

- 3 Levels and legs for ditto.
- 2 Level staves.
- 2 Chains, incomplete.
- 6 Ranging rods.
- 2 Ditto ditto.
- 1 Set of ivory scales, in case.
- 6 Boxwood ditto.
- 1 Spirit level.
- 1 Beam compass, (at Botany.)
- 1 Pair triangle compasses.
- 1 Mechanical scale.
- 1 Case containing drawing pen, bow pen.
- 1 Color box and brushes.
- 1 Steel straight edge.
- 9 Drawing boards, (3 at Botany.)
- 1 Pallet.
- 2 Ink cups.
- 1 Set of curves.
- 3 T squares, (2 at Botany.)
- 1 New tape.
- 2 Old Tapes.

Copy of lists of drawings prepared by Assistant Engineer, and delivered to Mr. Bell on his taking office as City Engineer.

E. BELL, C. E.

APPENDIX B.

ESTIMATE of the cost of a Main Sewer through George-street, to the northern extremity of Dawes' Point.

7,703 feet in length.

Say 3,379 lineal feet, at £5 15s. per foot .....	£19,429	5	0
„ 4,324 ditto, at £7 14s. per ditto .....	33,294	16	0
	£52,724	1	0

Of the drainage intended by Mr. Rider, west of George-street, I have no record, but had the main drain been made in George-street, the other drainage to the district west of George-street could not have been much less in extent than that proposed by me, and the estimated cost of which is about (£43,000) forty-three thousand pounds.

This latter estimate will, I believe, when the sewers are formed, be found to exceed their actual cost considerably.

EDWARD BELL, M. Inst., C. E.,  
City Engineer.

Sydney, 4 December, 1856.

APPENDIX C.  
CITY SEWERAGE.

RETURN of how much of that which has been done in tunnelling I would have carried out as open cutting, and the difference of cost.

	COST IF OPEN CUT.			COST AS TUNNELLED.			EXCESS.		
	£	s.	d.	£	s.	d.	£	s.	d.
Macquarie-street ... ..	1,366	8	11	6,328	12	0	4,962	3	1
Phillip-street ... ..	1,227	4	0	6,060	0	0	4,832	16	0
Elizabeth-street ... ..	1,187	9	0	5,403	6	0	4,215	17	0
Castlereagh-street ... ..	334	19	0	1,451	8	0	1,116	9	0
Pitt-street ... ..	1,610	0	0	6,260	0	0	4,650	0	0
Main Tunnel ... ..	441	19	8	1,875	0	0	1,434	0	4
							£ 21,211	5	5

EDWARD BELL, M. Inst. C. E.,  
City Engineer.

Sydney, 4 December, 1856.

Edward Bell,  
Esq.

## APPENDIX D.

3 Dec., 1856. AMOUNT of work done by Mr. Randle to the date of last certificate, November 24th, 1856, and Estimate of the amount required for completing his Contract under section No. 1, City Sewerage Works.

	£	s.	d.
Amount of work done... ..	111,522	6	6
Do. to be done ... ..	7,900	0	0
	£119,422	6	6

Amount of Estimates for other works in this section.

	£	s.	d.
Outlet of Main Sewer... ..	8,500	0	0
Back drain in Phillip-lane ... ..	750	0	0
Estimate for cross streets ... ..	24,690	10	7
Estimate of completion of outlet to Tank Stream ... ..	4,000	0	0
	£157,868	1	7

Sydney, 4 December, 1856.

E. BELL, C. E.,  
City Engineer.

FRIDAY, 5 DECEMBER, 1856.

Present:—

MR. IRVING,	MR. OXLEY,
MR. JONES,	MR. PLUNKETT,
MR. LANG,	MR. SCOTT,
MR. WILSHIRE.	

RICHARD JONES, ESQUIRE, IN THE CHAIR.

G. Elliott,  
Esq.

5 Dec., 1856.

Gilbert Elliott, Esquire, again called in and further examined:—

1. *By the Chairman:* I believe you are desirous of handing in a letter addressed to you by Mr. Hamilton, an engineer from Adelaide, in reference to the sewerage works? Yes.
2. In reference also to the construction he places on the contract between the City Commissioners and Mr. Randle? I do not think Mr. Hamilton alludes to that. (*The witness handed in a letter. Vide Appendix.*) The letter I now hand in is from a gentleman, an engineer, of thirty-five years standing, who has come from South Australia for the purpose of obtaining information, before commencing a system of sewerage in Adelaide, with reference to our sewers; it is merely thanking us for the opportunities we have given him of inspecting the sewers, and expressing an opinion upon the character of the work.
3. I believe you wish also to make an explanation with reference to an answer you appear from the Report to have given to a question of Mr. Scott, either on your first or second examination,—what is the nature of the correction you desire to make? It is merely this, that in the question of Mr. Scott certain figures are used,—the sum of £3,000 is mentioned. I did not at the time understand any sum to be mentioned, but thought I was merely asked whether there was not an error. I did not wish to commit myself to any specific amount.
4. Will you have the goodness to turn to page 4 of the Report of the Board, the part which refers to the classing of mixed ground upon which sewers are carried, and state whether the charges which the Commissioners have ultimately decided upon to pay for the excavations in the various sewers which have been constructed in Section No. 1, are in accordance with the views expressed by the Board appointed by Government to examine the sewers? They agree substantially with what the Board state to be the correct charges for these particular excavations.
5. These are the charges that have ultimately been paid by the Commissioners? These are the charges that have been paid.

## APPENDIX.

To the Commissioners for the Sydney Water Works and Drainage.

GENTLEMEN,

Permit me, on behalf of the Government Commission for the Adelaide Water Works and Drainage, to offer you my sincere thanks for the courtesy which I have received from you and your Engineer; for the very frank and liberal manner in which every inquiry has been responded to, and all possible information afforded; and for the unreserved way in which, without regard to trouble, everything has been thrown open to my examination.

It is not out of place likewise, as a practical Engineer of thirty-five years standing, to express how much I have felt gratified by the inspection of the works executed from the designs, and under the superintendence of your present Engineer; and also with respect to those works which have yet to be carried out to observe, that his designs and details bear throughout the impress of science and forethought, and give the fullest assurance of future effectiveness, as well as of economy, so far as can be made consistent with future results.

This

This morning I had an opportunity of minutely examining the Main Sewer, leading from the town into the harbour, at Fort Macquarie; also one of the smaller sewers; and I am confident that I speak quite within bounds in asserting it to be a work which would challenge successful comparison with similar works in any Capital in Europe.

I sincerely hope that it may be reserved to you and your talented Engineer to conduct both the Drainage and Water Works to a final close; and I am sure your names will be meritoriously associated with as well executed and as effective an undertaking as the Colonies can, or in our days will, produce.

I beg to remain, Gentlemen,

Your very obedient and obliged servant,

GEO. E. HAMILTON,

Engineer to the Adelaide Water Works and Drainage, and Consulting  
Engineer to the S.A. Central Board of Main Roads and Bridges.

Sydney, 28 November, 1856.

G. Elliott,  
Esq.

5 Dec., 1856.

Edward Bell, Esq., C. E., M. Inst. C. E., called in, and further examined.

1. *By the Chairman*: Will you be kind enough to explain to the Committee in what state you found the City Water Works when you took charge of them in February last—I mean the new Works at Botany, and the Works in connexion with them for bringing the water into Sydney? It will be rather difficult to make you understand that without reference to plans.

Edward Bell,  
Esq.

5 Dec., 1856.

2. I wish to understand what progress had been made in carrying out these Works—what steps had been taken? The ground was marked out on a plan. (*The witness produced a plan.*) That plan shews the site of ground taken, as nearly as possible, with the exception of the land at the two corners. The red line denotes the ground enclosed as a reserve for the Water Works. It includes a piece of Lord's Dam, which was taken possession of by the Commissioners for the purpose of the Water Works.

3. In what state did you find these works when you took charge—with reference to the enclosure? I found a three rail fence around the whole of the ground, except the frontage to Botany Bay.

4. Did you find any works commenced or completed on the land so enclosed? None, excepting the works that appear to have existed for some time at Lord's Mill and Dam.

5. Had there been any pipes or engines ordered, with a view to the carrying out of these works? Yes, both engines and pipes. Three engines were ordered, of seventy-five horse power each, and 2,200 pipes, each three yards long, and thirty inches in diameter.

6. Had there been a plan decided upon for carrying out these water works, as to the nature of the works that would be required? There had been some plans made of the works to be carried out upon this site.

7. Can you explain generally, to the Committee, the works which had been decided upon? It was decided, as far as I could learn, to fix the engines on the east side of the ground, near the cottage formerly occupied by Mr. Castilla, and it was decided, as nearly as I could learn from one of Mr. Rider's reports, to lay the main along the Botany Road, following its windings as far as Chippendale Toll-bar. In the first Yearly Report of the Commissioners there is a letter from Mr. Rider, in which he says, "It is my intention, with your approval, to place the main, for conveying the water from Botany to Sydney, along the turnpike road now existing between the toll-bar at Chippendale and the site of the intended works at Botany. This road I have caused to be carefully levelled, and a section plotted." I believe a running level was taken of that, but a section was not plotted, nor were sufficient levels taken for so doing. A running level was taken at five or six points, to ascertain the difference in the level of high water at Botany, and Chippendale Toll-bar and Sydney.

8. Will you be kind enough to explain to the Committee your opinion of the sufficiency of the plan which Mr. Rider had adopted, so far as you could ascertain what that plan was, for supplying the City with water? Yes. I will shew a plan of the ground so far as we have carried it. (*The witness produced a plan.*) This shews the line along which it was originally intended to lay the 30-inch water pipes, and also, the line intended to be carried out by me. It shews the land (about 75 acres) taken by the Commissioners at Botany, for the use of the Water Works, for the purpose of providing for an adequate supply of pure water, also that part of Botany Road extending from the works to about half a mile beyond the Waterloo Reservoir. One objection to the laying of pipes along the Botany Road was, that the number of bends which must have been made in the 30 inch main would have required more power from the engine to force the column of water to Sydney than if we lay them straight; the result of which would have been an increased annual expense; for the expense of working pumping engines is in proportion to the amount of duty performed, or nearly so. The intention was to pump the water to the head of a stand pipe 210 feet in height, at the head of which the water was to overflow into another descending main, and, from that descending main, it was to pass along the 30 inch main laid in the Botany Road, to Sydney. The objection to this was that the head of water at Botany would be constant, while the level of the supply in town would vary very considerably, and, under any circumstances, whether one or more reservoirs were placed in Sydney at different levels, the engines must always have been worked against a column of water equal to the extreme height of the stand pipe placed at Botany, viz., 210 feet; and, consequently, if thirteen-fifteenths of the City could be supplied from a reservoir in town, at the height of 120 feet above the high water mark at Botany, and the other two-fifteenths of the City could be supplied from a reservoir of 193 feet above high water at Botany, the engines, while supplying the thirteen-fifteenths of the City would be raising the water 73 feet higher than necessary. To meet this objection, I proposed to make two reservoirs of the relative heights before mentioned, and, if a stand pipe be introduced, to force

Edward Bell, Esq. force the water into the mains, to construct it in such a manner that the column of water within the stand pipe shall regulate itself according to the service which may happen to be in operation in the town, that is, the high or the low service? This may be simply explained by saying that instead of the whole water being forced up a height of 210 feet, I arranged that thirteen-fifteenths should be raised to about 140 feet, and the remainder to about 210.

5 Dec., 1856.

9. Will this change involve any difference in the nature of the works to be constructed at Botany? The difference in the length of the pipe.

10. Does it involve a difference in the expense of works to be erected here? It will involve a difference in the vertical stand pipe.

11. Will it render the stand pipe less costly in erection? Yes, for there were three ascending mains originally contemplated, but they would not have been very great items in the difference of expense, because I must have a frame to sustain a pipe of so great a height, and I therefore, do not think the difference of cost will be much at Botany.

12. As regards the piping, does your plan lead to greater or to less expense? There will be about three-quarters of a mile less main-piping required, from the City to the works. This is owing to the straight line having been introduced instead of the winding course along the Botany Road. Another inducement I had to adopt the present line was, that upon boring the ground upon the site originally contemplated, I found we should have had to get a foundation much below the low-water line at Botany Bay, and much below the water in the soil itself that generally exists at the swamp; I therefore removed the site of the engine-house to the western side of the swamp, where the rock crops up, as I could there get a foundation without hydraulic works at all. The next reason was, that I was able to get a straight line of piping through very easy cutting. This denotes the line (*pointing to the plan.*) In fact, if you stand at the end of Crown or Bourke Streets you can see the place where the stand pipe is to be erected, at Botany.

13. Are you satisfied that sufficient surveys were made, or preliminary steps taken by Mr. Rider to ascertain which was the proper line, before this recommendation was made? I think this advice was placed before the Commissioners before due care was taken to have the requisite data.

14. He had not entered upon a sufficient examination of the land here, of the country to be traversed, to enable him to give the best advice to the Commissioners? No; it appears that he had made such a "running level" as I have mentioned, and must have known that a careful levelling and a plotted section were necessary; he led the Commissioners to believe that he had plotted such a carefully levelled section, but no such section was plotted, nor had the levels been taken by which a proper section could be made.

15. You found no draft of it? No, and I believe that the plan or survey was not commenced till after Mr. Rider had left the office; then some of the Surveyors commenced it, so that the Commissioners were misled by his stating that he had carefully surveyed the ground and plotted a section. A mere running survey seems to have been taken, with the view of getting the difference on the level of Botany Bay and Sydney, in order that he might state what height the water would have to be raised, and what height the stand-pipe should be.

16. *By Mr. Plunkett:* Following the road? Following the road.

17. Will it involve a difference in expense to make the line straighter? It must be cheaper.

18. Will there be no compensation for land—I see by your plan that the line will go through Baptist's Garden? Yes; he must be allowed something for any injury he may sustain while the pipe is being carried through his garden, but the compensation cannot amount to much.

19. Would the pipe be much under the surface of the garden? It would be quite under the surface, and would not impede any of his drains or water courses. It will go below all his water courses, except one, and will not spoil the garden in the slightest degree after it is completed, but merely while the work is going on.

20. Will it interfere with any valuable property? No; it will pass through a corner of Mr. Hollinshed's garden, but that will not sustain much damage. It passes through some land let to Hughes and Hoskings, but the ground there is as nature formed it; at one part there are some fences and cottages being erected, but the greater part is as nature formed it.

21. *By the Chairman:* When the main is once down there will be no further interference with the surface of the ground? No; the surface would be restored to its previous state.

22. *By Mr. Plunkett:* Is the main laid along this road at present? Yes.

23. What has been the expense of that? I have a return here which I have caused to be prepared, of the expense. [*The witness handed in the same. Vide Appendix A.*]

24. That was all an useless expense? No, because while they are on the road they are close to the line, and it was considered better to pay half a crown to lift each of these when they were required, than to have to pay an enormous sum for wharfage. Indeed the wharfingers would not have allowed them to lie at the wharf for any sum, and they said they would throw them into the sea if they were not removed.

25. *By the Chairman:* Then, as I understand you, the moving of these pipes to the position in which they are now laid will not involve any additional expense? These pipes that are lying here will cost half-a-crown for lifting, and nine-pence for every half mile they are carried.

26. *By Mr. Plunkett:* Are they likely to sustain any injury where they are placed? No.

27. *By Mr. Wilshire:* Not if wood carts run against them? I am not aware that any have been injured in that way. From the Return I have handed in, it will be seen that the cost for moving the pipes originally laid along the road will be about £500, that is to take them up and move them.

28. *By the Chairman:* Above what it would have cost if they had originally been brought to this line? Yes; but I must observe that before they could have brought them to this line, trucks with larger wheels must have been made. They must necessarily have been brought on to this road at first, and then have come over the sand on trucks with broader and larger wheels.



29. So that, under all the circumstances, you do not think much useless expenditure has been incurred? No, and I will tell you why; after my predecessor vacated his post, and before I entered upon office, the pipes arrived; the Commissioners, of course, wanted to know what to do with them, and the Assistant Engineer advised that they should be put upon this road until the line was determined on. It was just during the transition, and I think the Assistant very wisely advised, and I believe I should have done the same thing under the circumstances. The estimate I have made of the cost of removing these pipes will not exceed £820; now, they would have cost the greater part of that sum to bring them to the line.
30. Do I understand you to mean additional cost to the City in consequence of the pipes not having been originally placed on the line? No. I think it will not exceed £200 in addition, but it will cost to put them on the line about £820.
31. You think, under all the circumstances, no better arrangement could have been than was adopted? I do.
32. Do I understand you to say that you could find no trace in your office of the section which Mr. Rider speaks of as having caused to be carefully levelled and plotted; could you find no trace of any such levels having been taken, or of such section having been plotted? I can find no such section, and I believe it has not been plotted. I find that he had made a running level, that is, taken five or six sights to ascertain the relative height of the two ends of the line.
33. To ascertain the height to which he should carry the stand pipe? Yes.
34. I understood you to say that there was not sufficient care taken to make preliminary surveys before Mr. Rider advised the work? Yes; it must have been a mere matter of conjecture with him.
35. Will you turn to your letter dated 28 March, contained in the second Report of the City Commissioners,—in the fifth paragraph of your letter you point out that the diameter of the pump is not given in the specification? No, it was not.
36. Do you consider this a material omission? It ought either to have been stated in the specification, or to have been left alone altogether. I conceive that if instructions had been sent home to the effect that the engines should be made in the best possible manner, in the best style of a pumping engine; or, if a contract had been made here, and the contractor had been left to get the best engine in London, that each engine should raise a million and a-half gallons of water every day, of twelve hours, a height of 210 feet head and 28 feet suction, or rather 238 feet altogether, it would have been much better. In the plan and specification sent home, no quantity was given; in the specification no duty was stated.
37. Was it not stated what work the engine would have to perform? No. I do not remember the terms of the contract, but there were sufficient figures given to cause very great confusion on the other side. The only means I have of ascertaining what diameter of pump Mr. Rider intended to have, is derived from his letter to the Board, where he speaks of a twenty-four inch pump, but he states no service or duty that the engine is to perform.
38. As I understand you, you think too little or too much was stated in the instructions given for the engine? Yes; for instance, it is stated in the specification that each engine is to be seventy-five horse power. Then, again, the same specification states that the cylinder of the engines are each to be of 42 inches diameter, 8 feet stroke, and that the speed of each engine is to be twelve strokes per minute, and that the engines shall each be equal to seventy-five horse power. Calculating the effective pressure on the piston at seven pounds per square inch, and the number of strokes at twelve per minute, this, of course, means *double strokes*, one up and one down; and upon this calculation the power of the engines would not exceed fifty-seven horse power each. Well, then, it states in Mr. Rider's letter of 22nd February, 1855, to the Commissioners, not in the specification, that "each engine will be provided with one double acting pump, the diameter of the piston of the pump being 24 inches." Now I was under the impression that it was to be 22 inches when I made this minute, because the tracing annexed to the contract made by Mr. Rider exhibited a pump of about that size, and from the description of the pump shewn, it appeared that that pump was to throw its full contents once on the up stroke, and again on the down stroke. It was obvious that a pump of such magnitude working against a column of 238 feet, was far beyond the power of such an engine as Mr. Rider stipulated for to work, even had it been equal to seventy-five horse power. The combined power of the three engines, working at an effective pressure of seven pounds per square inch, as stipulated by Mr. Rider, would not have been equal to work one pump against such a column of water. I consequently advised the Commissioners to allow me to address Mr. Homershaw, a celebrated Hydraulic Engineer in London, requesting him to inspect the engines, giving him the duty they were intended to perform, namely, to raise a million and a-half gallons, the requisite height, 238 feet per day of 12 hours, and the necessary instructions were sent by me, under their authority. It appeared from the reply to my letter received from Mr. Homershaw, that the makers had discovered the mistake which I had, viz., that the pump was so very much disproportioned to the power of the engines, and they had consulted another Hydraulic Engineer, Mr. Hawkesley, upon the same subject, and were endeavouring to remedy the mistake as well as they could, at the time my instructions arrived, by constructing a pump to the proportions advised by Mr. Hawkesley.
39. They were remedying the defects? They were endeavouring to remedy the defects. I think it was very justly observed, in one of the letters from England, of the drawing and specification, that the drawing was a copy of a plate in Tredgold, and that the specification was taken from the same work.
40. It was not designed specially for the purpose of this particular work? No, nor was the specification adapted to the purpose in any way.
41. Do I understand you to say that the engine as drawn, and the specification as written out, had no reference one to the other? They had reference one to the other, but the specification was almost confined to the details of the engines, and contained nothing necessary for the guidance of the maker, as to the duty the engine would have to perform. It is always

Edward Bell, always customary with a respectable engine-maker to decline anything that trammels him in any way in the performance of his work; he will take your order if you will allow him to make the engine in the best possible manner, and will undertake that the engine shall perform the duty required, to your satisfaction.

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42. But he will not undertake to make an engine to satisfy impossible conditions? No; nor to satisfy the crotchets of any engineer; he will enter into a contract to make the best possible engine, both as regards workmanship and principle, a latitude being left to him to carry it out as he pleases, except as to some stipulations with regard to the form and size of the engine. But as to the details of the engine, I was satisfied that no respectable pumping engine-maker would work upon such instructions.

43. And you find practically that has been the case? Yes, I understand so, without assigning the reason, beyond stating that they were too busy; but I may say they do not refuse business which is in their line, or which will be likely to do them credit.

44. There have been surveys made of the ground purchased by the Commissioners, works laid out by Mr. Rider, and I believe tenders received for those works, but no works have actually been commenced? No; some borings have been taken on the bank and about the ground, to ascertain the nature of the soil.

45. *By Mr. Plunkett*: Has that ground for a water works been properly selected as to its extent? I think so. You must probably some day introduce filters, and I think then the whole ground will be valuable for the filters and necessary works, but I do not think there is too much ground.

46. *By the Chairman*: Will you state to the Committee your estimate of the cost of your plan of supplying Sydney with water? About £160,000; but that does not include the purchase of land.

47. Can you tell what will be the cost of the purchase of land? No; I have understood it will be £25,843 5s. 8d.

48. Will this £160,000 include the whole of the works? No; it includes the low level reservoir in Sydney.

49. Not the high level reservoir? No; there is a supplementary estimate for that.

50. What will the probable cost of that be? The cost of the high level reservoir and the mains in connexion with it will be about £15,000.

51. Do I understand you that £160,000, together with the supplementary estimate for the high level reservoir, will include the total cost of all the new works that will be required to supply Sydney with water? It does not include the engines, but it includes the fixing of them.

52. What will the cost of the engines be? The contract price of the engines is £18,000; but there will be something to pay for the alterations that are being made to adapt them and the pumps to their required duty.

53. About how much will that amount to? A portion of the expense will have to be borne by the contractor, and a portion by the Commissioners. I do not think it will exceed £2,000.

54. Making £20,000 for the engines? Yes.

55. Do I understand you to say that £160,000, and £20,000 for the engine, the amount to be paid for the high level reservoir, and the cost of the land will include all expenses? The money to be paid for the main brought here, the 2,200 pipes is not included.

The cost of these, I am informed, was about .....	£40,000
This amount, together with the sum of .....	160,000
Ditto for the engines .....	20,000
Ditto for land .....	26,000
Ditto high level reservoir, &c., &c., as before mentioned...	15,000

This in all will make about .... .. £261,000

56. Where is the low level reservoir situated? Between Riley and Crown, Gipps and Campbell Streets.

57. Where is the high level reservoir? On the sand hill near the barracks.

58. Have you any knowledge of what your predecessor estimated as the cost of carrying out the works he contemplated for the same service? No; I do not think he could well form an estimate for his works at Botany. I have not done so yet, and I do not think he could have done so.

59. Do you think your plan less expensive than that he contemplated? The works I have devised have been arranged solely with a view of ensuring efficiency and avoiding expense. There is so much water in the soil at Botany, that it is absolutely impossible to estimate the cost of putting down works below a certain level, but I have endeavoured to select a place where I have a natural foundation on the rock.

60. Do you think the works you contemplate are quite adequate to supply the City with water? I have no doubt of it. I have been making careful experiments upon the discharge of water from the Commissioners' property into the Bay, and at the present time the water running into Sydney from Lachlan Swamp, and that running to waste at Botany, would be quite sufficient to supply the present, or perhaps nearly double the present population. But when the population has increased beyond that, you will require no further water-works at Botany, or elsewhere, but you will require increased storage room for water, that is, more reservoirs in the town. You will then have to resort to reservoirs, for this simple reason, that in the driest month of this year you have 1,800,000 gallons, daily, running away at Botany, and 600,000 gallons running into the town from Lachlan Swamp. That quantity would be nearly sufficient for double the present population, but in other months you have about 8,000,000 of gallons running away, besides the quantity running in from Lachlan, making 8,600,000 gallons of water at your command per diem, and this might be all brought into

into the town and stored in reservoirs in Sydney. There might be reservoirs made under Hyde Park that would carry 148,000,000 gallons of water, without in the slightest degree interrupting the pleasure of the public. The reservoirs would necessarily require to be covered with brick arches, puddled on the top to prevent soakage, this would be covered with earth and mould, which would be sown with grass and clover seed, to form a green sward on which the public might amuse themselves as well, or perhaps better than now. That is the plan which must be adopted when the population increases to twice the present number. You will have sufficient power, without any further works. Each day of twelve hours you will be able to lift, by each engine, a million and a half of gallons into the town to the highest level, and by working all the engines together during twenty-four hours, you may supply to the town six times that quantity.

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61. *By Mr. Oxley*: Would the present main convey the quantity? Yes, it would be quite sufficient. It would only be an increased duty upon the engines, and on the number of working hours. Two engines would, instead of three millions in twelve hours, send in six millions of gallons working day and night, and the other engine would send in three millions of gallons. The present quantity running to waste at Botany is eight millions per diem on the average, and as this I believe to be nearly the maximum, the power of the engines will be ample.

62. *By Mr. Plunkett*: You say the reservoir in Hyde Park must be covered in? Yes.

63. Is that essential? Absolutely essential; for any piece of water exposed to the atmosphere of a town takes up every impurity that the atmosphere contains, and these impurities are again distributed amongst the population in their water.

64. Supposing it were in Hyde Park, what necessity would there be to cover it in; if drainage into it were prevented would it not very much beautify the Park? It would, no doubt; but it would cause the water to be impure, as all the impurity of the atmosphere would be taken up by the water; this is known to be the case, and to have engendered much disease.

65. Would there be no means of filtering it? That would not purify it, and would be more expensive, and very inconvenient in the town.

66. Looking again to the ornamental part of the question, do you not think it would be better to save so much of the water that runs away at Botany as may be necessary to beautify Hyde Park, even though it may be at some extra expense; might it not be let in at one end and filtered at the other? The water which must be brought into the town for flushing the sewers and watering the streets may be kept in an open reservoir, and one such reservoir could not be better placed than in Hyde Park. I have a plan in course of preparation for this, but which is not yet sufficiently completed to bring before you; it will shew the arrangement which I propose should be eventually carried out, for the construction of pure water (covered) reservoirs, to provide for the wants of the population in seasons of excessive drought, and the open reservoirs, for the flushing of sewers and watering of streets, all to be situated in Hyde Park. The latter may be constructed, and are arranged with a view to ornament the locality.

67. Will that be attended with much expense? Yes, so far as the storing reservoirs for pure water are concerned, but they will be attended with only a gradual expense, as the requirements of the population need it. You would not want the whole of Hyde Park to be turned into reservoirs at once, but ultimately, you would require reservoirs that would hold 144,000,000 gallons. The proposed reservoir for the lower level would hold 3,500,000 gallons, and those which I propose to put in Hyde Park may be of a corresponding size, and constructed one or more at a time, as found necessary and convenient.

68. What is your object in placing your lower reservoir in its present situation, instead of bringing it on to Hyde Park? Because I found the level of Hyde Park was not sufficiently high to supply the houses in the higher streets, in the western part of the City. It was necessary, in order to make the supply of the town perfect, that the water should be raised ten or fifteen feet. By that means we shall supply thirteen-fifteenths of the City, whereas, by having it in Hyde Park, we could only supply the part we do now, and that badly.

69. *By the Chairman*: So far as the works have proceeded, are you satisfied that the materials supplied and the work executed are good? All the pipes that have come to us I am satisfied with; some few were cracked, but those were rejected.

70. So far as the works have gone you are satisfied they have been well done in point both of material and work? Yes, with the exception I have mentioned with regard to the engine. What the Commissioners will have to pay for will be something in addition to what Mr. Rider appears to have anticipated.

71. *By Mr. Oxley*: From your experience of water works, do you think there is no fear of this iron pipe becoming corroded, and so diminishing the diameter in the course of years? No; that main may be occasionally cleaned out, and coated inside. You may store in the proposed reservoirs (high and low level) four days water in Sydney, and this will afford ample time for attending to the main; in a few hours the main may be emptied and cleaned out if necessary.

72. Have you made provision for opening the pipe in any places to enable a party to go in? Yes; we shall have a valve at every 50 feet elevation, with a cover over it, which will enable a man to get in.

73. A man hole? Yes; in point of fact a man might get in at one end and scrub it, and it would all run to Botany; but it could be done more quickly by having openings at certain intervals, and it will be done so.

74. How often do you contemplate having to clear that pipe out? If it were cleaned out nicely and whitewashed, it would cost little trouble; it would not require to be cleaned out more than once a year.

75. You think once a year would be quite sufficient to prevent corrosion? Yes; I may state that all swamp water is considered destructive to—

76. I know that the water of Botany in pipes where there is no great fall corrodes them very

Edward Bell, very much, and the effect of that in course of time must be to stop them entirely; I wish to know whether that was taken into consideration in purchasing this main pipe, whether that has been provided against? It is not provided against.

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5 Dec., 1856. 77. I have not seen provision in any pipe for a man hole? No, you will not see it in any pipe. At every upcast there is a bend, and it is here I shall have the valves I have mentioned; you will not see them, and they are to come in the contract just concluded. These are matters of detail seldom shewn upon a plan.

78. Did Mr. Rider in his plan provide for the necessary check valves and man holes to enable parties to clean out the pipes at the proper periods? No? I have not found anything of the sort.

79. Since you have taken charge of the office, have you made arrangements for having proper intermediate openings in the pipes, and providing proper check valves to take the pressure off the pumps, in various parts of the pipe? Yes.

80. Those valves and bend pipes have not yet arrived? No; they are only lately ordered.

81. Since you have taken charge of the department the pipes have been ordered? I think within this month. It is necessary also to introduce an air vessel immediately above the air pump, to take the sudden resistance which the plunger of the pump has to encounter in first putting the column in motion. If an air vessel of proper construction is placed there, it will relieve the pipes from the sudden action and pressure they would otherwise have to sustain at each delivery of water from the pump, and will tend most materially to prevent their bursting.

82. Is it not usual, in all pumps required to force a heavy column of water any height, to provide an air vessel to relieve the pump? Yes; an air vessel would, in a great measure, dispense with the use of a stand pipe altogether, and I thought of putting these works in motion, while we want only about two millions of gallons of water a day in the town, with an air vessel, and let the stand pipe be an after measure. The stand pipe would be an additional security against the bursting of the lower part of the main—that is, the part nearest to the pump, where the pressure is greatest and most irregular.

83. Is it not customary, in small water works of this description, to dispense entirely with the stand pipe, and to trust to the air vessel to keep up the pressure? Yes, where there is not so very long a length of main, and very high column of water, as in this case; but if the three engines are forcing water at the same time, to their full load, through this 30-inch main, the stand pipe will be a great safeguard against the bursting of the main at the Botany end, as it will keep the pressure in the main more equable than if there be no stand pipe, and consequently the main will be less liable to burst. In applying air vessels to these engines, I consider it necessary, in order to increase their efficiency, that they should have the assistance of a small air pump, and have provided accordingly.

84. *By Mr. Scott:* What size are the main sewers? Six feet by four, of an oviform.

85. What will the main sewer receive in the way of drainage—what will it carry off, simply rain water, or the filth and dirt of the town, including necessaries? We should on no account allow cesspools to empty into them, but only allow water closets to discharge themselves into them, soil pans, &c.

86. What is the difference between a water-closet and a cesspool? A cesspool is a reservoir which contains a certain quantity of filth, according to its capacity, which is not fluid; but a water-closet, every time the pan is used, it is flushed with water, and the water, being used at the same time that the water-closet discharges its contents, carries off the solid matter. There is always enough water used to carry off any solid matter, by holding it in suspension in the sewer; but if you allowed a cesspool to discharge its contents into the sewer, it would only go a short distance, and would then choke the sewer up, and all the water you could use would not relieve it. For this reason, when the sewers are brought into use the cesspools must be filled up, and water-closets or soil-pans must be used, which can be flushed with water; so that it will be necessary, in order to get these sewerage works into full operation, to have the water works also in operation at the same time, for if privies are allowed to be connected with the sewers, without water to flush the pipes, much nuisance will result.

87. We will not look at the present requirements of the City, but are bound to look a little into futurity: a hundred years hence this City will be much improved, and much more built upon, and all necessaries will probably have become, as they are now in London, water-closets. Do you think, looking to the future, this main sewer of six feet by four will be sufficient? Yes, quite sufficient. I am quite confident they are sufficient for a much larger area than that to which they are applied; and they have a much greater fall than any sewers of the same size with which I am acquainted.

88. Except in London? In London some of the sewers have no fall at all.

89. The main sewer in the Strand? They have in general a fall of a quarter of an inch to ten feet, but the sewers here have three-eighths of an inch in ten feet,—that is the smallest gradient we have here. The sewers in some of these streets will carry an enormous quantity of water away, far beyond anything they will have.

90. The main sewer empties itself at the Fort? Yes.

91. How will this affect the harbour ultimately? I do not think the harbour will be in way affected by it. I believe all the offensive matter will be carried off, and that you will not be subjected to so much annoyance as you are now.

92. I am not speaking of the nuisance, but of the effect in filling up this fine harbour. Might not this evil be remedied by the formation of cesspools at the mouth of the sewer? Yes, and then remove the solid matter.

93. Would not numbers of persons be glad to remove the soil—is there any provision made for that? I think with regard to other parts of the town that might be advantageously carried out, but I think people would object to cart this solid matter to a distance of five or six miles from town. On the other side of the town, where the City slopes down towards the swamp, if we can keep the sewage matter from the water we drink, it would be a great advantage

- advantage to agriculturists, and also to the City itself, to have the solid matter removed in that way.
94. Have the Commissioners taken any steps to form a cesspool at this extremity of the drain? Yes, there is a small tank formed there into which the sewerage water can be diverted for the purpose of being pumped away.
95. Previously to going into the harbour? Yes, and from which it could be pumped into a reservoir to settle, if funds were provided for it.
96. *By the Chairman:* This provision can be superadded at any time? Yes; there is sufficient means of pumping away all sewage matter, but when there are heavy rains it must be allowed to go into the harbour.
97. *By Mr. Scott:* You have said in your evidence previously that you discovered the whole of the brickwork in Macquarie-street to be nine-inch? Yes.
98. And that any person could have ascertained this, because there were holes of considerable size at the bottom of the brickwork? At the side, where the side entrances will come into the sewers.
99. Were they left purposely? Yes; it is where the pipes will be brought in. It was only necessary to put the hand through to feel whether the brickwork was nine or fourteen inches thick.
100. It has come to your knowledge that very many mistakes have been made by Mr. Rider and Mr. Mais in various admeasurements? Yes.
101. Against, always against, the Commissioners? Yes, generally.
102. Will you mention any instance or instances where it happened to the contrary, where the measurement has been against Mr. Randle? Yes; in Macquarie-street there were forty-five feet in length either of excavation or tunnelling omitted to be charged.
103. Will you state to the Committee who found out this error? I did myself, in chaining the street.
104. Neither the late Engineer nor the contractor discovered it? No; the contractor knew nothing about it. I think there was also some little piece of six or seven feet due to him in one part of some other street, which he omitted, but it was not a very important amount.
105. Was there not a wrong direction taken in tunnelling some part of the sewers, so that the two tunnels did not meet? Yes, that was the case in two places.
106. Was the contractor allowed by Mr. Rider to put up an S curve in one place? They told me they had permission, when I discovered the error, to put in an S curve to accommodate the misdriving. It was to have been an ordinary curve originally, but in setting out the curve they did not make the proper sets-off. To remedy the evil they proposed to have an S curve.
107. Would any engineer properly qualified have permitted this? No, certainly, on no account.
108. With respect to the water works,—what is the area of this land at Botany? Seventy-eight, or something near eighty, acres.
109. What portions of this seventy or eighty acres did you depend upon in order to get your supply of water, or did you depend upon the whole of it? We depend for our supply upon the whole of the water shed from Lachlan Swamp to Botany.
110. You get a supply of water, then, over and above what this area contains? (*Referring to the plan of the land at Botany.*) Yes; that area is fed by a stream which comes through Lord's and the other swamps. This runs all the way from Waverley, in fact.
111. This is merely supplementary to Lachlan? Yes; all the water that does not run into the City from Lachlan, passes through small channels and various swamps to Botany.
112. Are all the lands about here under cultivation? No.
113. Will they be? No; they are all sand hills and swamps.
114. Is it likely there will be buildings here? No; I think not.
115. Might not the swamps be made available in some way for gardens—the swamps in the neighbourhood of Mr. Cooper's property have been drained, and are now under cultivation? If there were to be gardens in the neighbourhood of these swamps, the water from them would naturally drain into the water supply for the City, and filters would then be necessary.
116. What is your idea of the effects of the filter? My idea is, that you get the purest possible water by means of a filter, if the filter be properly made.
117. Take the purest and clearest salt water, will filtration make it fresh? No.
118. The filter will take away the coarser matter; but if the soil were impregnated with urine, or salt, would filtration remove that? No.
119. The filter, then, only purifies the water from any coarse material that may be in it? Yes; but you may make it purer by the process of Dr. Clarke, by introducing lime. I think this land ought to be kept exclusively as a water reserve, and not allow any portion of it to be converted into cabbage gardens. There is a long stream passes through the swamps, and my idea is, that instead of letting sixty-four millions of gallons of water go to waste, there might be in every gorge from Waverley to Botany some simple means of checking the water from passing from one swamp to another. I would retain the water in the swamps under ground, and beneath the scrub or bushes which grow on the swamps: this would shade it from the effects of the sun, and secure it in some measure from evaporation.
120. You say there is a great waste of water about this swamp? Yes.
121. Is there not in any other portions? No; it is not perceptible; it soaks through the banks into the sea. Since I headed the water up, and raised it twenty-eight inches to try the quantity discharged per diem over the edge of the waste board, the beach, which before was perfectly white sand, is now covered with vegetation, and it has only been two or three months in operation.
122. We will now take an extreme case. Suppose the weather was extremely dry, the water allowed to escape would naturally all do so, and the soil would become dry to a certain level—could you ascertain what supply you would have under that level? It is impossible to tell.

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123. Have you not tried by borings? Yes; and from the borings I have made, I could put no limit to the supply of fresh water in the quicksand under the hard crust of sand which exists in the swamp.
124. So that if you dug here to a considerable depth, would you not obtain a large supply of fresh water? Yes.
125. Would there be any probability of its filtrating away, or decreasing considerably from other causes? No; it is retained in its natural basin by a rock which crops out in Botany Bay, at the margin of the Commissioners' property. The water is confined by this rock, which shows itself all along this surface. (*Referring to the plan.*) The northern side of Botany Bay and this rock is covered with a coating of clay three, four, or five feet thick. It is a natural basin. Under the swamp there is hard sand, or sandstone in a state of formation, through which the water filters.
126. So that if we had three years continued drought, as we have before had in this country, there would be an abundant supply of water for double, treble, or quadruple the present population? Yes.
127. With this fact before us, would it not be better to have a reservoir here, from whence the water might be carried by means of a stand pipe to Sydney, rather than to have the reservoir, as you have suggested, in Hyde Park? My impression is, that the reserve ought to be in the town.
128. *By the Chairman:* So that in the event of any mishap occurring to the main you have a supply in the town to last a considerable time, during which the repairs may be made? Yes; and then in case my conjecture as regards that body of water should be wrong, to meet such a contingency I would store up some of the enormous quantity of water which now runs to waste, in reservoirs, which would be covered, in such manner that they would take up no impurities from the atmosphere, and lose no water by evaporation. The supply in the one case is problematical, in the other it is not so. The present storage of water which will be provided by the high and low level reservoirs, I propose for present purposes, is not so great as this City ought to have; the quantity of storage ought to be such as to place the City beyond the possibility of want, in the driest seasons.
129. *By Mr. Scott:* Will you point out on the plan Busby's Bore, as it is called? It is the tunnel which now leads the water from the highest swamp into Sydney. This swamp is bounded by the South Head Road and the Waverley Hills. I proposed that the water which is brought by means of the present tunnel (600,000 gallons of water per day,) into Sydney, should, after the new works came into operation, be used for the supply of Woolloomooloo and the lower levels of the City.
130. What do you reckon is the fall of rain in this country? I think the average is about forty-nine inches.
131. Taking 49 inches as the average fall of rain, and supposing a drought for three years, do you still consider that this area would yield sufficient water to supply the wants of the increasing population of Sydney? I have not made any calculation in that way, because I cannot tell what the evaporation may be; the surest basis of a calculation I could get, was the record of what passes out to the sea at Botany.
132. Was not that taken in the most favourable season? No, in a dry season. But I have been enabled to obtain from Mr. Lord's evidence the amount of work done in his mill during that three years. To do a certain amount of work, he must have a certain quantity of water, so that I am enabled to form a rough estimate of the quantity that passes there. I am sure, therefore, that with what would be stored in wet months, and what I could obtain there in dry months, a sufficient supply could be obtained, without sinking a shaft or well in the earth, as I mentioned, for double the population, that is taking the present population within the walls at 60,000 or 120,000, when you have to resort to this storage. I propose to give the people here twenty-five to thirty gallons a day, a greater average supply than they have in London. This includes watering of streets and flushing of sewers, and the latter duty will not require to be frequently done, as the occasional heavy rains perform it most effectually.
133. I think you said that the reservoir in Crown-street will be sufficient to supply most of the people of Sydney? I mean, the elevation of it will supply thirteen-fifteenths of the city.
134. Then what is the object of the high reservoir near the Military Barracks? To supply the highest levels.
135. About two-fifteenths of the population? That relates to the area to be supplied, not exactly the population at present. The object of the high and low level reservoirs is to divide the supply into two services, and thus to save much expense. Two hours working of the engines will fill the higher reservoir, and the other ten hours working will fill that on the lower level.
136. What is the height of the stand-pipe? The stand-pipe cannot be less than 226 feet.
137. What is the height of the upper reservoir above sea-water level? 193 is the bottom, and 208 is the top.
138. Supposing the pipe were plugged up at Crown-street reservoir, have you calculated whether the pipes here are sufficient for the pressure of the water, supposing they are 200 feet high? Yes; they all have to be proved in England by a column of 300 feet, and they are equal to 400 feet.
139. Did Mr. Rider order that? Yes, to stand the pressure of a column of 300 feet, and I say they are equal to 400 feet.
140. *By the Chairman:* And proved to be equal to 300 feet? Yes.
141. *By Mr. Scott:* That is an immense pressure without there be an outlet? There is an outlet—there will be an overflow in both these reservoirs. There are four valves to shut the water off from the lower reservoir, and when these are all closed the water will ascend the main to the higher reservoir, which, like the lower reservoir, will be provided with an overflow pipe, to carry away all surplus water and prevent the reservoirs from overflowing.

142. *By the Chairman*: According to your plan the stand-pipe is self-regulating? Yes; directly the water is shut off from the lower reservoir, it will rise in the stand-pipe and then in the main till it reaches the higher reservoir. As soon as the water begins to ascend in the stand-pipe, its effect would be felt by the engine sufficiently to direct the attention of the man in charge to it, in addition to which there will be a gauge adapted to shew the column of pressure necessary to propel the water to one level and the other. This would also shew when there was any obstruction in the main, as a slight obstruction would cause a partial rise in the column of water in the stand-pipe.

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143. It would be a sort of self-registering engine? Yes; it would shew what head of water there was in the stand-pipe. Supposing, for instance, the regular head or column of water in the stand-pipe for supplying the lower reservoir, when the main is quite clean, to be 160 feet, a slight obstruction or incrustation in the main would cause the column in the stand-pipe to rise above the ordinary working level; this would immediately attract attention, and the main would be inspected forthwith, and cleaned if necessary. With regard to the prevention of incrustation in pipes, I find that in Melbourne they have stipulated that their pipes should be heated up to 300 degrees, and coated inside with a coating of black varnish. I do not admire that plan, for I know the stuff would all drop off in a short time if the pipes were previously subjected to damp. I would prefer whitewashing.

144. *By Mr. Scott*: I think you stated that the man-holes and check-valves were neglected by Mr. Rider? They were not prepared.

145. They were not in his estimates? There were no plans; he had not gone into them at all, consequently his estimate cannot guide one.

146. I think you stated that in your plan you go through Baptist's garden? Yes.

147. And that he will claim some kind of compensation? He may possibly do so. There is a large hill at the end of Bourke-street through which we must take the line if we do not go through Baptist's garden, and that would cause some considerable expense to pass through. In addition to this, when you come to the upper end of Bourke-street there is no favourable piece of land for a reservoir, and then we have to make bends to get to Crown-street, so that we should lose some of the advantages we obtain from the straight line. It would be better, in order to secure these advantages, and to avoid the expenses to which I have alluded, that we should go through Baptist's garden.

148. Is Mr. Baptist well supplied with water? Yes; he is obliged to drain his land; but we do not interrupt his drainage in the slightest degree.

149. I thought whether giving him the benefit of a water-cock or plug from the main would be sufficient compensation for any injury that might be done to his garden? We must not allow any one to tap this main—we ought rather to bring him down a pipe independently of the main, but this is not advisable. There should be, but I do not know whether there is, a severe penalty imposed upon any person tapping or interfering with the main.

150. Supposing Mr. Rider had, without any check whatever, continued the management of these works, do you conceive that he would have carried them out effectually, or would they have proved a failure, judging from the plans and specifications sent home. Suppose, for instance, they had sent out pumps and engines without air vessels? He did not appear to contemplate any air-vessel, but must have had one. On the whole, I do not think he understood anything at all about water-works.

151. Probably it would have ended in a failure? Yes, as it stood it would have been a failure; but the errors and omissions might have been remedied.

152. *By the Chairman*: It would have involved great additional expense to have made it practically effective? Yes.

153. *By Mr. Oatley*: I would refer to the discharge of the sewer at the Fort. Mr. Scott asked you whether you proposed to make a cess-pool there, and to pump the average sewage matter up,—have you any idea what would be the size of the pump required to pump up the sewage matter there, allowing the thin matter to run off? I have not made a calculation.

154. Have you heard of any plan proposed by the Governor General to supply the Botanic Gardens with manure? Yes, I made an estimate, and I believe almost the suggestion, stating that I had put up one near Reigate, to irrigate the land at Red Hill.

155. That pump would have had no appreciable effect upon the discharge of gross matter into the harbour? No, not very; it would merely have taken the water and the solid matter held in suspension, and pumped it into a tank in the Gardens, for distribution; the quantity it would have taken from this would have been about (40,000) forty thousand gallons in 24 hours.

156. Without reference to the expense of galvanizing the interior of these pipes, is it not pretty generally known to practical men that the purest water will take up all the zinc, and so become impure? It would not improve the water at all.

157. The water, after passing through galvanized iron pipes, would require to be filtered? Yes, through sand.

158. *By the Chairman*: You believe that water passing through galvanized iron would take up more or less of zinc? Yes.

159. Do you know as regards Morehead and Rogers' Patent, that in the opinion of many medical men, water passing through pipes galvanized by their process is improved rather than injured? Yes, so it is reported.

160. Medical men say that the only injury it does to the water is that it makes it slightly aperient? Then it must be affected by the zinc.

161. Some kinds of water will act upon zinc more than others? Yes. The Commissioners informed me, when I first took office, that the water here had a prejudicial effect upon lead, and I thought it rather astonishing, as I had elsewhere found swamp water had no very great effect upon lead, but a very prejudicial effect upon iron.

162. Has it not upon all metals? Perhaps not so much on copper or brass.

Edward Bell, Esq. 5 Dec., 1856. 163. *By Mr. Scott*: What becomes of all the sewerage water—the street water? That will pass through the gratings into what we term gullies. A gully is a cistern underneath the grating, and the water then passes, by means of a syphon, from immediately beneath the grating into the main drain, whilst the road drift remains in the gully. Unless these gratings are placed at proper intervals, with the cisterns beneath them, the drain will become choked.

164. You think these gullies an effectual means of keeping the drains clear? Yes; most of the gullies have to be cleaned, after every torrent, of solid matter which would otherwise pass through the sewers.

165. Would not a cess-pool on the plan of these cisterns, with a syphon leading into the harbour, be sufficient at the main outlet of the sewer? No, I think there is no occasion for that. It would be very difficult to carry out such works at Fort Macquarie, from its position.

166. Might there not be a succession of cess-pools, with syphons to them, at the outlet? There might be, but they would be very expensive.

167. *By Mr. Lang*: You are aware that a piece of ground has been enclosed from the sea at the lower part of the Botanic Gardens? Yes.

168. Could not a reservoir be made there? Yes, in the rocks contiguous to the sewers, to catch the sewage deposit; it would, doubtless, be much better for the harbour; and it might be underground, to prevent its being any nuisance, but it would be very expensive.

169. *By Mr. Scott*: Would it not be better to incur any expense rather than that this fine should be stopped up? No doubt.

APPENDIX A.

*City Commission.  
Engineer's Department,  
November 14, 1856.*

AMOUNT due to Mr. Woods, on account of 30-inch mains removed from the wharfs in Sydney to the Botany Road:—

	s.	d.		£	s.	d.
69 pipes, 31wt. each, to 2 $\frac{3}{4}$ miles, @ 13 0 per ton .....	13	0		69	10	4
131 " " to 3 $\frac{1}{4}$ " @ 13 9 " .....	13	9		139	11	11 $\frac{1}{2}$
168 " " to 3 $\frac{3}{4}$ " @ 14 6 " .....	14	6		188	15	9 $\frac{1}{2}$
143 " " to 4 $\frac{1}{4}$ " @ 15 3 " .....	15	3		169	0	2
242 " " to 5 $\frac{1}{4}$ " @ 16 0 " .....	16	0		300	1	7
227 " " to 5 $\frac{3}{4}$ " @ 17 6 " .....	17	6		307	17	4 $\frac{1}{2}$
62 " " to 6 $\frac{1}{4}$ " @ 18 3 " .....	18	3		87	13	10
				£1,262 11 0		

The cost of removing the above pipes to their destination can only be given, at present, under estimate, and therefore I beg to state that I estimate the cost of their removal to their destination will not exceed (£500) five hundred pounds.

AMOUNT due upon 1,100 pipes left near the Chippendale Toll-bar, for convenience, during the clearance of the wharfs, to be removed again by Mr. Woods, under his original contract:—

600 pipes, 31wt. each, to 3 $\frac{1}{2}$ miles, @ 13s. 9d. per ton .....	639	7	6
500 " " to 3 $\frac{3}{4}$ " @ 14s. 6d. " .....	561	17	6
	£1,201 5 0		

The cost of removing these pipes will be—

For lifting 260, at 2s. 6d. each .....	32	10	0
For do. 840, at 2s. each .....	84	0	0
	£116 10 0		

And (9d.) nine-pence for every  $\frac{1}{2}$  mile distance of cartage, from their present position, to their destination on the line laid down. I estimate that their cost will not exceed (£320) three hundred and twenty pounds.

EDWARD BELL, C. E.  
City Engineer.

Sydney, 3 December, 1856.



WEDNESDAY, 10 DECEMBER, 1856.

Present:—

- |             |               |               |
|-------------|---------------|---------------|
| MR. GORDON, |               | MR. OXLEY,    |
| MR. JONES,  |               | MR. PLUNKETT, |
| MR. LANG,   |               | MR. SCOTT,    |
|             | MR. WILSHIRE. |               |

RICHARD JONES, Esq., IN THE CHAIR.

Joseph Trickett, Esq., called in and examined:—

J. Trickett, Esq.  
10 Dec., 1856.

1. *By the Chairman*: You were appointed, in March last, one of a Board to examine the City Sewerage Works? Yes.
2. You joined in that examination? I did.
3. In the course of your examination were you led to believe that the plan of sewerage adopted in section No. 1, the section you were then examining, was well adapted for the purpose for which it was intended—I mean as regards its capacity, gradients, and levels? Yes, I consider the plan well adapted for the purpose.
4. You think the sewers quite ample to carry off the sewage? Yes, more than ample.
5. What is your opinion of the gradients? They are more than we find them, generally, in sewerage works, for the town lies so favourably for draining.
6. In the course of your examination had you occasion to suggest any alteration in regard to the plan of the drainage, which you understood to have been contemplated by Mr. Rider? On looking at the plan, we saw only section 1 laid down; but having a general idea of the shape of the town, it occurred to me that a greater part of the town could be drained by the natural outlet.
7. Section 1 took in Pitt-street as its western sewer? Yes, and up to Macquarie-street on the eastern side.
8. Do I understand you to say, that in the course of your examination it occurred to you that a larger portion of the City to the westward could be drained by means of the sewers in this section? Yes; it occurred to me that the whole of this basin (*referring to a plan on the table,*) lying with an inclination to Sydney Cove, might be drained by this sewer.
9. Did you recommend any variation from the plan which you understood had been originally suggested? I believe it was suggested, after calculating the size of the drains, and the area, that the drains were sufficiently large to receive the sewerage from all this portion of the City; that is to say, Clarence-street, nearly as far as Argyle-street.
10. You understood that Mr. Rider contemplated a main sewer down George-street, towards Dawes-Point, and intended that the streets to the westward should be drained into that? Yes.
11. Do you believe the alteration you have suggested, and which the Commissioners have adopted, will be as effective as the plan originally adopted by Mr. Rider? I think it will be more effective, for you will convey a larger portion of sewage matter along the drain, and will therefore have a greater flushing in them, and be more likely to keep them free from deposit.
12. *By Mr. Plunkett*: Will there be much saving of expense? There will be the saving of the cost of a drain throughout George-street.
13. Have you made any calculation as to the actual saving of expense? No, I have not.
14. *By the Chairman*: Your impression is, that it will materially diminish the cost? Yes, it will materially diminish the cost. I should think—I could not say precisely—from £20,000 to £30,000.
15. And will, in some respects, be more beneficial, inasmuch as it will cause a more thorough flushing of the drains? Yes. I may state that our computations were based upon information obtained from a series of experiments, made on drainage work in London, extending over a period of twenty years.
16. You believe if Mr. Rider made any mistake in his original conception or plan of the sewers, it was rather in providing an excess in the size of the sewers than otherwise? Yes, the size is more than ample. I may state that the main sewer is capable of draining an area of 537 acres, while the area which the sewer is required to drain amounts to no more than 141 acres.
17. With the additional land you now propose to take in, you will have 247 acres, which is not much more than two-fifths of the quantity the sewers are capable of draining? Just so.
18. Besides, will it not be a matter of convenience to the inhabitants of George-street not to have the street broken up? It will be a great convenience, as well as a great saving. We computed the fall of storm water at one inch per hour; that does happen, although but seldom, and not for any time together.
19. One of the points to which your attention was more particularly directed, was in reference to the excavations—the character of the ground, whether it was rock, soil, or of a mixed character? Yes.
20. I presume you are satisfied that the examination you made had qualified you to arrive at a tolerably correct conclusion as to the character of the soil through which the sewers are laid? Yes, as far as it is practicable to judge. We had the ground opened in various places, and we found the description of work answered to our statement, and that the prices paid were generally of an average.
21. Do you think the steps you took, of having the ground opened, was sufficient to enable you to judge fairly? I think so, as nearly as possible, without having the whole line of sewers open throughout.
22. Then if the sums paid by the Commissioners to the contractor are found to be in accordance with the views you have expressed in your report, as to the character of the ground, you think

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- think these sums will be equitable and fair, as between the citizens and the contractors? I think so.
23. I suppose you are not in a position to say whether the amounts paid by the Commissioners are in accordance with the views you have expressed in your report? I am not aware.
24. You found that a great portion of the sewers had been carried on by tunnelling? Yes.
25. What are the comparative advantages and disadvantages of tunnelling as compared with open cutting? In tunnelling there is not the opportunity of executing the work so solid as in open cutting; there are no means of packing it solid round the sides and over the crown of the arch. It can be done, but with an immense deal of trouble and a considerable addition to the expense. In the second place, there is not the means of exercising proper supervision over the work.
26. I understand you to say that by tunnelling you cannot do the work so well as by open cutting? You cannot.
27. Is there any great difference in the cost of the two modes? I think tunnelling is more than double the price of open cutting to a certain depth, say fifteen feet.
28. Where excavation does not go beyond a certain depth, tunnelling is more expensive than open cutting? Tunnelling is double the price up to fifteen feet.
29. Beyond that depth, the cost of the two modes would approximate? They would approximate to about thirty feet in depth.
30. In the course of the examination you made of the sewers, were you led to believe that tunnelling had been resorted to in places where open cutting would have been preferable, and where it was practicable? I think open cutting was practicable and preferable, in many places, where tunnelling had been resorted to, that is to say, in Elizabeth-street, in Macquarie-street, and, in fact, in all the streets. In no case, if I had the management, would I have resorted to tunnelling under a depth of fifteen feet, unless under peculiar circumstances, such as the crossing of a street, or in a narrow street, or where the soil was treacherous.
31. I understand you to say that, in most of the streets, you would have preferred and adopted open cutting? Yes.
32. As being cheaper, and as being better suited for securing thoroughly sound work in the sewers? Yes.
33. Which, in a work of this character, you regard as of great importance? Yes.
34. *By Mr. Plunkett:* Do you take into consideration the inconvenience it would cause to the traffic of passengers to open cut? I think the inconvenience would have been little more to have carried on the work by open cutting. The streets are generally wide enough to allow of the soil being packed on one side, where the cutting was not of greater depth than fifteen feet, without causing inconvenience.
35. Would blasting have been necessary in open cutting? In some cases, but not generally; it would be, of course, where there was solid rock; but there are means of guarding against danger from blasting, by carefully covering the cutting when a blast is fired.
36. *By the Chairman:* So far as the traffic of the street is concerned, tunnelling, I presume, would interfere less with it than the open cutting system? In some cases, in some parts of the town, but I think generally open cutting would not have interfered with the traffic of the streets much more than the tunnelling. If you have to tunnel fifty or sixty feet, all the stuff taken out of the tunnel must be thrown down at the mouth of the shaft, and that I think is more likely to obstruct the street than an open cutting.
37. You think where the cutting is not above fifteen or sixteen feet deep, the stuff thrown out of the cutting will not materially interfere with the traffic? It may be packed up on one side of the street without causing any serious obstruction.
38. Can you suggest to the Committee any reasons why the system of tunnelling was so generally resorted to, where you think open cutting would have been preferable? I can only conceive that it was owing to an error of judgment on the part of the Engineer, perhaps, in some cases, with a view to avoid interference with the traffic in the streets.
39. In page 141 of the final Report of the Committee of the late Council, you will see there is charged in Macquarie-street, 131 rods 94 feet of brickwork, and by referring to the top of the page you will find that it is charged as fourteen inch brickwork, amounting to £5,514. If you refer to page 6 of a Return laid on the Table of the Assembly, on the 20th of August last, you will find that there is charged 85 rods, amounting to £3,576 5s. 10d., shewing a difference in the two amounts of nearly £2,000. As a professional man, can you explain to the Committee how such an error could have been made on the 25th October, 1855? No, I cannot.
40. Can you suggest to the Committee any reasonable mode in which such an error could have been made in the measurement of this brickwork? I cannot possibly conceive how the error could have been made. It is a very straight forward piece of work, and by a proper mode of measurement, I can see no reason why even a small discrepancy should occur.
41. If you refer to page 140, you will find that on the 11th of October, there were 119 rods of brickwork charged for, then it increases from 119 in the course of the next fortnight to 131—can you conceive it possible that a professional man could have made a personal examination of this work and made an error of that character? I cannot.
42. That he should have certified on the 11th of October, that there had been 119 rods of brickwork executed, and then on the 25th of October he should again have certified that there had been 131 rods, while nine months after it is found on examination that the total quantity of brickwork executed is 85 rods and some feet? I cannot comprehend how a mistake of that kind could have been made.
43. And repeated? I cannot conceive how it is possible except by some loose manner of keeping his measuring book, possibly the same work may have been measured twice and entered a second time in his book. I cannot account for it in any other way.
44. Could that have occurred when it is shewn that the quantity of brickwork has increased progressively—on the 29th September, it is charged 93 rods 256 feet; on the 11th October,

119 rods; and on the 25th of October, 131 rods? I do not think it could have occurred if ordinary care had been used—if the 'party had referred to his back measurement when he measured. It could not have been done by one man if he had worked out the whole quantity himself.

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45. Suppose the whole of these measurements had been made by one Engineer, that he stated he had made them each time, and personally examined the work each time, can you understand, then, how such an error could occur? I cannot.

46. *By Mr. Plunkett:* Suppose the measurements were made by two different persons, how would that account for the mistake? It might be made by the clerk in the office who made the computation; for instance, a person measuring the work would enter in the book a certain quantity of brickwork, which would be entered in the office books by the clerks; another officer in making the next measurement might be unacquainted with the former measurement, and so measure the work again. But this could not occur if a proper system was carried out.

47. *By the Chairman:* These measurements were made by the Assistant Engineer, Mr. Mais.—On the 4th of October, he was examined before the Committee then sitting, with reference to this measurement, and he was asked "When you certify that one hundred rods of brickwork have been performed, does that give you notice of the length or thickness of the brickwork?" He replies, "It gives the thickness, because it is stated in the certificate whether it is nine inch or fourteen inch work—so many rods of nine inch work, and so many rods of fourteen inch. Will you undertake to say that it is so? I am certain it is—I write out the certificates. There can be no mistake about it? I am sure of it." Can you understand how a gentleman giving these replies on the 4th of October, could, on the 25th of the same month, certify to these gross errors in Macquarie-street, having had his attention pointedly called to the matter in this way? I can suggest no reason why such a mistake should have occurred.

48. *By Mr. Plunkett:* Either as to the quantity of rods, or the difference between nine and fourteen inch brickwork? No; the brickwork is reduced to a thickness of fourteen inches—272 feet of brickwork fourteen inches thick is a rod, or, 306 cubic feet. The usual way is to reduce the superficial quantity of brickwork to fourteen inches thick, and then divide by 272, to bring it into rods.

49. Can you at all account for a person certifying that brickwork is fourteen inch whereas it is only nine? No.

50. How could such a mistake as that occur if a person went over the work? I do not know; the plans and sections would shew whether the work was to be constructed of fourteen or of nine inch brickwork, and it would be the duty of the Engineer to see that the work was executed according to the plan—even by a measurement of the work on the plan there would be a sufficient check against such an error. It would be easy to compute what would be the whole quantity of work in Macquarie-street sewer from the length marked on the plan. There are different points in the streets, public buildings, and cross streets, on which marks could be made, and which would be sufficient whereby to arrive nearly at the amount of work done from time to time, without actual measurement.

51. *By the Chairman:* I will now direct your attention to the third item charged under the head of Macquarie-street, in page 141 of the Final Report, and page 5 of the Return. You will find in Mr. Mais' certificate, endorsed by Mr. Rider, and dated the 25th of October, there were 2,903 feet of driving in rock charged for, amounting to £11,612.—On the 4th of July Mr. Bell certifies that the amount chargeable was for 2,545 lineal feet tunnelling, £10,182 13s. 4d.; can you suggest to the Committee any way in which this error could have occurred? It appears to have arisen in the same careless manner as the error in the brickwork—in lineal measurement, in particular, there ought to be no mistake. There might be some mistake in computing the brickwork in reducing nine inch to fourteen, but in lineal measurement it is almost impossible to make an error—a reference to the plan would be sufficient to detect an error of that kind.

52. Could an error of this kind arise from the carelessness of the person who assisted Mr. Mais? It is possible the chain might have been taken up at one end. That has been done occasionally. In fact, it is necessary to have some one you can depend upon to hold one end of the chain while you stand at the other.

53. *By Mr. Plunkett:* What do you mean by a person taking up the chain? If a man were in a sewer at a distance of 66 feet from me he might take half a dozen links in his hand without my seeing him.

54. Would a man be likely to do that without having some object? If a man were interested in the execution of the work—I only say it is possible, I do not say it is probable, but that it has been done in other cases.

55. Would it be such a saving of trouble as to induce a man to do it without any other object? If a man entered into a contract for tunnelling this street he might take up half a dozen links in his hand when the work was measured, with a view to obtaining a greater payment than he was entitled to.

56. Who were the persons who generally held this chain? In the case of measuring work for a Company or for a Board of Commissioners, it ought to be done by the officers of the Engineer's Department, but it is not for me to say who held the chain. I do not mean to infer that anything wrong of that kind has been done; I only say it is possible.

57. Admitting the possibility, would any person holding the chain be likely to take up the links as you describe, if he had not a fraudulent object in view? If he were to do it wilfully he must have such an object.

58. *By the Chairman:* These measurements are certified to have been made fortnightly; and Mr. Mais says he did not on each time trust to prior measurements, but that he re-measured each fortnight. I find this quantity of driving in rock is charged for on the 13th of September, on the 27th of September, on the 11th, and on the 25th of October.

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Now is it possible that the carelessness of the person assisting could occasion this mis-measurement to the same extent each time? Probably, if the same man were employed to assist in the measurement.

59. And did it designedly? And did it designedly. It is probable that Mr Mais did not measure at all; he might merely have held the book and noted down the measurement.

60. Supposing he states that he made the measurement each time? It is not at all times the duty of the Engineer to hold the chain and to make the actual measurements; it is his duty to see that the chain is held correctly. In the Board of Works in the Ordnance, they have one officer to take the measurements, and another to take them down.

61. It would be his duty, in making the measurement, to see that the chain was held correctly? Yes.

62. He would not discharge his duty faithfully unless he took effective means to see that the chain was held correctly? He would have a man he could depend upon at one end of the chain, and himself at the other to record the measurements.

63. Can you, from that plan before you, tell the length there is in Macquarie-street altogether? [*The witness referred to the plan.*] No, I cannot; there is no scale on the plan.

64. There is another item in Macquarie-street to which I will call your attention; it is at page 141. You will find there 480 junctions charged £312; now in Mr. Bell's return of the 4th July, you will see there are no such junctions charged at all, but 56 collars charged for, at a cost of £11 4s. How is it possible that these junctions could have been charged for on the 25th of October, 1855, when in July of the following year it was found that there were no such junctions, and that there were only 56 collars, which might have been mistaken or mis-charged for as junctions? Junctions and collars are not the same, and are not so much alike as to be mistaken one for the other.

65. Can you account, in the first place, for a person charging for junctions that did not exist? I do not believe the man could have examined the work himself, to have seen whether they were there or not; he must have taken the word of some one on the works. There is no possibility of a professional man mistaking a junction for a collar, or the number 56 for 480.

66. Will you be kind enough to run up the total amount certified to for work in Macquarie-street on the 25th of October? £18,703 15s.

67. Will you turn to page 6 of the return before you, and see the amount certified to for work in Macquarie-street on the 4th July, 1856? £15,061 13s. 5d.

68. Subtract the latter amount from the former, so as to ascertain the difference? It is £3,642 1s. 7d.

69. There is that difference between the amount certified to on the 25th of October, 1855, and the amount shown to be done on the 4th July, 1856? Yes.

70. Can you understand how a man competent to discharge that business, and acting uprightly, could have made errors amounting to so large a sum as that shown in the certificate of October, 1855? No; I can form no idea.

71. You cannot suggest to the Committee any reasonable supposition as to the cause of the error occurring? No.

72. Even supposing some reasonable suggestion could be offered for an error in one particular item, is it possible that errors on the two chief items, and one of the other chief items, could have occurred, and all in favor of the contractor? I cannot conceive how such errors could have occurred; if the work had been measured with anything like due care, nothing of the kind could have occurred. In fact, I see no reason at all for any variation from the correct measurement.

73. Can you conceive it possible that a professional man, acting with the most ordinary care, and acting honestly, could have fallen into such gross errors as these, all against the employer? I can offer no excuse for such errors.

74. *By Mr. Plunkett:* Allowing for any degree of negligence short of fraud, can you account for it? I can only fancy that a man might go on the work, and take the measurements from some person interested, without taking the trouble to measure the work himself, and note it down. There must be great carelessness or neglect to cause such measurements.

75. *By the Chairman:* If you refer to the measurements in Pitt-street, you will find, that on the 27th September he certified to 3,577 lineal feet driving in rock, £16,096 10s, while on the 4th of July, Mr. Bell and his assistants certify that in this same sewer there were only 2,790, at a total cost of £12,555 15s., being a difference of upwards of £3,500 in the cost, and of upwards of 800 feet in the quantity—can you suggest to the Committee any mode in which this error could have occurred? I think it is owing to the same careless plan that was adopted throughout.

76. As a professional man, you can offer no reasonable suggestion to the Committee as to how these various and very gross errors could have occurred? No.

77. If the most ordinary care had been used in making these measurements, could these errors have occurred? I see no reason for any of these errors being committed in the measurements, with the exception of that made in the tunnelling, where, if the Engineer never took the trouble to go down and see where the measurements were taken from, but took the measurements above ground, such an error was possible; but if it were so, that was an act of negligence that ought not to have occurred.

78. Was it not a gross dereliction of duty for the Engineer to send to his employers certificates of work performed by the contractor, on which certificates payments were to be made, without satisfying himself that the amounts certified to were correct? I can only account for the error being made in that way.

79. *By Mr. Plunkett:* Can you account for it even on the supposition that he had measured over ground—would that account for the difference in quantity? Not if due care had been used—if the measurements had been properly entered in a book or on a plan. Of course there

there should have been a plan upon which should have been marked each fortnight where the measurement had commenced and where it had left off.

80. *By Mr. Lang*: It appears to me that if they had merely measured the length of the street they would have detected every error? The work was done in portions, and these detached portions of the work were measured at different times. For instance, in Elizabeth-street they commenced at the end of the street,—there were so many feet there; then there were so many feet at the other end; and there was also a piece in the middle;—so that there were measurements to be taken in several parts of the street. They were driving both ways at each place, and it required some caution to keep a correct account of the measurement: to put down marks to show where the measurement left off, in order that the next measurement might start from the proper point.

81. It would only be detected by that means when the tunnel was open, when the Engineer could walk through from end to end? The Engineer should have his plan before him, shewing the length of the street, and it is his business each time to check the preceding measurement.

82. *By Mr. Plunkett*: Suppose we come to the brickwork:—On the 25th of October it is certified that 131 rods have been executed in Macquarie-street, but it turns out, ultimately, that there were but 85 rods;—even supposing this had been measured on the surface, would that account for the mistake? I think I said there might be some excuse if it had been measured on the surface, but not if ordinary care had been used. I think even in measuring on the surface, if a tunnel were driven from one end of a street to the other, unless some marks were made by the engineer, to show how far he had measured, he might include a previous measurement; but if he took due caution in his measurement book, no mistake could possibly occur.

83. *By Mr. Wilshire*: It would not be possible to ascertain the exact quantity done unless a person went down through every portion of the tunnel? The assistant ought to have gone down and measured the work.

84. *By the Chairman*: You suggest that a person might possibly make an error from not going down, but as the Engineer who was required to certify what portion of the work went through rock and what portion through soil, was it possible he could do so without going down to examine the soil? In a work of this kind, which extended over some months, it is possible, unless he made certain marks, that he might forget how far he had measured on the preceding occasion, and he might take the evidence of the foremen, or of some person interested in the work. But it could not have occurred if he had used proper care and precaution in making the necessary marks.

85. Would it be possible for an Engineer remaining above to certify correctly as to the character of the ground through which tunnelling was being carried, as to whether it was rock or soil, or of a mixed character? Not at all.

86. Could he ascertain without going down? I think he might, without going below, from the stuff that was brought up. He could easily ascertain whether it was solid rock, or soil, or mixed soil and rock, by constantly watching at the shaft to see what was brought up; but he could not tell from looking at the large heap at the mouth of the shaft, because he would only see the surface. It would be necessary, in order to enable him to form a correct opinion, that he should go down daily and examine the strata as the work went on, and before the brickwork was begun.

87. *By Mr. Plunkett*: He might judge of the quality from what came out, but not of the quantity? I mean that he would not be able to tell unless he watched the stuff as it was brought out.

88. *By Mr. Lang*: Do you not think that would be a very rough method of proceeding, when the difference between the price of tunnelling or cutting in rock and in soil were so great? No doubt he ought to go down.

89. *By Mr. Oxley*: You were talking about the possibility of making mismeasurements,—do you think it possible such mismeasurements could have been made if the Engineer had had in his office a proper plan, on which the measurements were marked,—could he have been deceived by these mismeasurements if he had had such a plan, even though he had not been in the street at all himself? I think there should have been an enlarged plan and section, which should have been filled up as the work proceeded. Every measurement should have been noted on this plan.

90. He should have had a plan in his office, so accurate, that he could have sat down at his own board and checked these measurements without going into the street at all? No doubt; when he came to the whole length of the street he would then at once see if there was more than the whole length put down; and even when there was only a part of the street done, certain points in the street could be marked, so that an engineer by walking over the street could see whether the measurements were correct.

91. If an engineer kept such a proper plan it would be impossible for a contractor to outwit him? It is usual to have a plan and to note the work as it proceeds, in a book and on the plan.

92. *By the Chairman*: Supposing Mr. Rider had had what you conceive to be a proper plan of Macquarie-street, would not that plan have shown how much of the work ought to have been, or actually was, nine-inch brickwork, and how much was fourteen inch? Certainly; there would be a plan and sections shewing the height, breadth, and thickness of the sewers.

93. From such a plan could not the Chief Engineer have calculated to within a few rods the total length of that street? I would not say merely to within a few rods, but to within a few feet.

94. Supposing he had had proper plans, if he had not gone down the sewers, but had merely examined his plans, and checked the account of the work by the plan, he ought to have detected so great an excess as the charge for brickwork in this part of the sewerage? Yes; when

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when one part was finished to any known permanent point of the street, it ought to, and could, have been checked by the progress plan. There should be on the plan every measurement of the quantity of work performed.

95. Are you aware of the mode adopted by Mr. Beil in carrying on the work, with regard to the progress plan? Yes.

96. Under the mode adopted by Mr. Bell, of noting down, each fortnight, the progress of the work, is it all possible that such errors as these to which I have called your attention, could have been made? It is quite impossible.

97. Do you not conceive that any competent engineer, or any man under a proper sense of what was due to those by whom he was employed, would attempt to carry out such important works as these without such plans? I consider them indispensable.

98. Any competent and faithful man would not think of going on with such important works without having such plans before him? It is the common rule in all such engineering works.

99. Will you have the goodness to turn to page 13 of the Final Report,—you will there find laid down certain conditions as to the delivery, by the contractor to the Commissioners, of weekly accounts, and daily vouchers, of the quantity of work, and so on;—will you read over carefully the two paragraphs preceding the last, and state the construction you put upon these conditions; what you think they render obligatory upon the contractor to do? (*The witness read the paragraphs.*) The first report or account referred to, is one shewing where the work is situated, and something like the quantity of work done, but it is not an actual measurement of the work. As regards jobbing and day work, it is essential for the time to be checked; but as to the other it is not. In fact that clause is taken from a Board of Works contract, and it is very seldom carried out even by the Board of Works at home. I apprehend that if an engineer had, in the contract, nothing but that to enable him to check the work, he ought to have other means in his possession. This would simply point out where the work was situated, but would not be sufficient to define the nature of the work, the actual quantity, or anything like the actual quantity. It states, in the next paragraph, that a bill is to be furnished by the contractor to the Commissioners. Now in making actual measurements it is usual for the quantities to be taken by the Engineer on the part of the Commissioners or other employer, and by the contractor, or an agent on his part, at stated periods. The computations would then be made up separately, and the contractor would then send in his bill.

100. Each fortnight? No, each three months; the other is a mere progress report, and I think, generally, even in the Board of Works under the Ordnance Department, they are paid very little attention to when they are sent in; for they are mere statements sent up by the contractor, to point out where the work is situated, and something like the work done, but not as a matter of account. The quarterly measurements are actual measurements of the work performed during the quarter, and are made up by the Engineer and his assistants.

101. You conceive that if these daily and weekly accounts had been sent in, as provided for, to the Commissioners, it would not have enabled them practically to check the accuracy of their Engineer's fortnightly certificate? No; I think they would be so complicated that even the Engineer himself would find it difficult to check the work, unless there were actual measurements taken.

102. *By Mr. Scott:* I see in this Report you are described as Superintendent of the Coining Department of the Royal Mint? Yes.

102. Are you a Civil Engineer by profession? Yes, I am an Architect and Civil Engineer.

104. You are quite sure that open cutting is cheaper and more efficient than tunnelling? I have no doubt about it. I may mention that I was above a year a member of the Board of Works and Local Board of Health, at Woolwich, and we designed the whole system of drainage of the Woolwich District, under the regulations of the Board of Health; part of it was completed before I left England. I therefore speak from practical knowledge of the matter.

105. And you are equally sure open cutting would not have offered any serious obstruction to the traffic of the various streets? None whatever; at least not more than tunnelling.

106. You cannot state, I suppose, how much of the tunnelling in this section might have been performed by open cutting? I could not without making a computation, and I am not in possession of all the measurements. I think I said I saw no necessity for but very little tunnelling throughout the section. In most cases open cutting would have been quite sufficient for nearly the whole section.

107. You stated that you considered it an error of judgment on the part of the City Engineer to have so much tunnelling? Yes.

108. Are you aware whether it is the Engineer or the contractor who directs this tunnelling to be done? The Engineer.

109. He does it, or ought to do it? Yes.

110. You are not aware whether the contractor has been in the habit of doing as he liked in this matter? No.

111. Considering that in Macquarie-street there are manholes, junctions, and collars, do you not think it inexcusable for any Engineer to certify that the whole of the brickwork in that street was fourteen-inch work when it was only nine-inch? Yes.

112. For as there were manholes, junctions, and so on, he could have ascertained with great ease? Yes.

113. Would you, as an Engineer, certify to the absolute correctness of any measurement, not having measured the work yourself, but trusted to others? Yes, I would trust to a competent assistant, having proper plans before me, which I could have checked. It is not usual for the Engineer in all cases to measure.

114. It has been stated by a previous witness that it was customary in measuring the sewers here for one of the contractor's men to hold one end of the tape, while the City Engineer's man held the other—do you reckon that the correct way—would you certify to the correctness

- ness of work so measured? I would if I were at the end of the chain with the contractor's man, and my officer were at the other end. J. Trickett, Esq.
115. But that was not done; it was stated that the contractor's man had one end of the chain or tape, and the City Engineer's the other—would you reckon that the correct way? 10 Dec., 1856.
- No; I think the measurements ought to be taken by the City Engineer and his own assistants.
116. In the way I have stated to you these measurements have been usually taken, could not errors be made wilfully as well as negligently? Decidedly.
117. When the Chairman asked your opinion as to the certificates given, and the errors made in the Macquarie-street sewer—in particular with respect to the brickwork, the length of driving, and the number of junctions—you used the word "careless"; you said it might have been done in a "careless" way—do you think that word a proper—a sufficiently expressive word to use on this occasion? I impute it to carelessness on the part of the Engineer and his assistant. I would not wish to use a stronger word.
118. *By the Chairman*: Supposing it to be carelessness, is it not, looking to the importance of the work, and the obligation under which the Engineers were laid to the parties by whom they were employed and paid for the purpose of properly supervising this work, carelessness of a very culpable character? I do not think they were fit for their duties.
119. *By Mr. Scott*: Money was paid, or might have been paid, upon those Engineer's certificates to the tune of £150,000—if that had been lost owing to gross errors, do you think "carelessness" would be sufficiently strong or not: it is a very mild expression? I wish to use a mild expression. I would not impute fraud to any one.
120. You know the inclination of the respective drains? I do not, from memory.
121. You have known it? Yes.
122. Are the sewers, in your opinion, sufficient for all the purposes of drainage? Yes.
123. The size of the main sewer is six feet by four? Yes.
124. Do you reckon that when this town is perfectly completed in the way of buildings, and when every house is accommodated with proper water-closets, as in London, leading into these drains, that the main sewer then would be sufficient to carry off not only the rain water, but also the gutterage, or street water, and the filth from the various water-closets? Quite sufficient, for many years to come.
125. *By Mr. Wilshire*: Is it customary for architects or engineers to give certificates to contractors, without previous measurement, in order to enable them to get larger payments, on account, than the work will justify? No; it is usual to give a certificate for something less than the amount actually performed.
126. In order to enable the contractor to receive a greater per centage than agreed upon? No, it would have a contrary effect. It is generally usual to give a certificate for less than the work; to err on the safe side, to keep a little under rather than above. If I were making a calculation, roughly, I would wish to be on the right side.
127. Is it honest, do you think, for an engineer or an architect to give such a certificate—a false or incorrect certificate? I think he gives an undue preference to the contractor when doing so.
128. Is it honest to give such an undue preference? I think you can form your own opinion, Of course it is not honest to give a false certificate.
129. *By Mr. Lang*: In coming to the conclusion that it would have been better to have had open cutting instead of tunnelling, do you take into consideration the very great expense that must have been gone to to have removed the stuff taken out of the cuttings, and to have brought it back again? There would have been no necessity to have taken it away; it might have been packed up without being carted away.
130. Are you aware that in Phillip-street, which was open cut, though not very deep, the thoroughfare was totally closed up? In Phillip-street there was a great deal of superfluous stuff that the Commissioners did not cart away, because, I believe, it was wanted at Fort Macquarie, where it is now being carted.
131. But suppose you have open cutting to a certain depth, you have not only to throw up the stuff from the place where the sewer will be, but all above it, and that must either remain in the street to fill up the cutting again, or it must be carted away and brought back again; now, from the quantity of stuff I have seen in the streets, even from tunnelling, I cannot see that the expense of carting away the stuff from cutting, and of bringing it back again, could be avoided? I do not apprehend that any stuff need be taken away and brought back again, or but very little.
132. Do you think, for instance, in Pitt-street, they could have built up on one side of the street all the stuff that would have been required to fill in the cutting there, supposing that had been open cut? Pitt-street might have been open cut without more interruption to the traffic of the street than has been caused by tunnelling. In one part of Pitt-street it might have been necessary to tunnel; but, generally, I think open cut could have been carried out without inconvenience.
133. Are you aware that many drains, water-closets, and other things, emptied themselves into the old sewer there, and that all these would have been cut through? I have seen some, but there was nothing to prevent open cutting. I believe in Phillip-street the cutting was open throughout the whole street. This was quite unnecessary; if it had been carried on properly a small portion would have been opened and then filled in, and the stuff taken out might have been shifted to a short distance, with a wheelbarrow, either one way or the other.
134. If you were in the position of Engineer to the Commissioners, after taking all these things into consideration, and making up your mind that the work ought to be by tunnelling instead of by open cutting, would you consider it to be within the province of the Commissioners to object to your proposal? No, I think not; the Engineer is the adviser of the Commissioners, and the whole responsibility lies with him.
135. You have looked over the whole system of drainage and sewers in this City, have you not? Yes.
- 136.

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136. What do you think of the whole as to the work? I consider that the work is done very well, the materials are generally good, and the workmanship is of fair average quality.
137. It is fitly designed for the purpose intended, and is calculated to last? Yes.
138. Is it much inferior, or is it equal, to works of the same kind performed at home? I think it is quite equal to works done at home; with the few exceptions pointed out in the Report.
139. *By the Chairman*: Did I understand you to say you had been engaged in works of this character at home, and to some extent had become acquainted with them practically? Yes.
140. Can you inform the Committee what the practice is in towns at home, with regard to their cutting and tunnelling? In the Woolwich District, as a rule, we had no tunnelling under fifteen feet, and some of the streets were not more than twenty feet wide. This was the rule, which in some few cases was departed from, where the soil was treacherous, being formed merely by a deposit of mud. This is an extract from the specification:—"The ground shall be excavated in open trenches to the necessary width and depth of the drains. No tunnelling will, on any account, be allowed, except under circumstances which render it unavoidable, and then only with the express sanction of the Engineer."
141. You are satisfied, from your examination of the sewers in April last, that the work, as a whole, with the exceptions pointed out in your Report, will be satisfactorily done? Yes.
142. And that, on the average it is quite equal to similar works at home? Yes it is.

Alexander Dawson Esq., called in and examined:—

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1. *By the Chairman*: I believe you are the Colonial Architect? I am.
2. Are you besides an Architect a Civil Engineer? I am both Civil Engineer and Architect. I have done duty seventeen years as Civil Engineer.
3. In company with Mr. Bell and Mr. Trickett, I believe, you made an examination of the City Sewerage Works in the month of April last? In the beginning of May.
4. Did your examination of these works, at this time, lead to the conclusion that the plan of the sewerage for section 1, was well adapted for the purpose? It appeared to me to be generally well adapted for the purpose.
5. The sewers were sufficiently capacious to carry off the drainage? Yes, the drainage of the whole of the watershed it was intended to embrace.
6. And the gradients were sufficient to prevent accumulations in the drains? Yes, in fact they are favourably so.
7. And you believe that the general conception of the sewerage in section 1 was good? Yes.
8. In the course of your examination had you occasion to suggest any alteration in the plan for the purpose of draining a larger extent of the City than was originally contemplated in the section 1 contract? We thought a larger shed could be drained than was contemplated by Mr. Rider.
9. Were you led to believe that it was contemplated by the previous Engineer, Mr. Rider, to carry a main sewer down George-street, to drain the western side of the watershed into George-street? That was his intention, I believe.
10. And you were led to believe, from your examination of the area, that the whole of the land which falls to the eastward of Church Hill could be drained by means of the present sewerage? Yes, with this exception—the drain in Bridge-street was three feet six inches, and it was suggested that it should be enlarged to four feet six to give it greater capacity.
11. With that alteration, the sewer would be large enough to drain the land lying to the westward of Pitt-street? The main sewer, as executed, would be of sufficient capacity.
12. And you accordingly suggested, that instead of making a main sewer down George-street, the area extending to Clarence-street should be drained by a cross sewer into No. 1 section? Yes; we considered, from the natural favourable gradients of the shed, it would be superfluous to put a second drain in George-street.
13. You think the plan suggested and adopted by the Commissioners would be quite as effective as having a main sewer down George-street? The additional size of the sewer would be quite unnecessary.
14. By the plan you suggested, the expense and inconvenience of having a sewer down George-street would be obviated? Yes.
15. You were, I believe, especially directed to examine the character of the ground through which the sewers were carried, with the view of determining what the proper charges would be for tunnelling and excavation—what proportion should be charged as rock, and what proportion as soil? Yes.
16. What steps did you take to satisfy yourselves on that point? Several excavations, to the required depth, for the purpose of ascertaining the nature of the ground. I think we made five or six, and inspected the open cuttings that lay exposed at the time; that was the only mode.
17. Are you satisfied that the steps you took were sufficient to enable you to judge pretty accurately as to the nature of the ground? Yes.
18. You believe that the views expressed in your report, as to the character of the ground in the streets through which the sewers pass, are substantially accurate? Yes.
19. And that if the Commissioners finally paid to the contractor for the excavations in these streets, in accordance with the views you expressed, that payment was equitable—fair—as between the contractor and the City? I think the prices stated would be fair and reasonable to both.
20. And if it can be shown that the prices the Commissioners have finally paid are in accordance with the views you have here expressed, the City has not been overcharged in regard to



to the character of the ground through which the sewers have been carried? I do not think the City is overcharged.

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21. You also, I believe, directed your attention to the subject of tunnelling and open cutting? Yes.

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22. What do you conceive to be the advantages of open cutting as compared with tunnelling? You get much sounder work done in open cutting than you can do in tunnelling. There are greater opportunities of the work being badly done in tunnelling than in open cutting, as you cannot so easily detect the quality of the work in the former as in the latter.

23. Besides admitting of the work being done more thoroughly—from being more open to inspection—is the system of open cutting, generally speaking, cheaper than the system of tunnelling? Yes, I think so.

24. Of course that will depend upon the depth? Yes, and the nature of the sub-soil.

25. To what depth do you say open cutting would be much cheaper than tunnelling? That is entirely dependent upon the nature of the sub-soil—generally to a depth of from fifteen to eighteen feet; it is preferable to trench rather than to tunnel. Then again, open cutting is, in many instances, to be avoided; if there is rock to blast, it is better to tunnel in such cases.

26. Because where rock is very near the surface, it would be somewhat dangerous to life and property to blast there? Yes.

27. From your examination of the sewers, were you led to believe that tunnelling had been resorted to where it would have been better to have had open cutting? I think in some instances. All below Bent-street, without any inconvenience to the public, might have been open cut.

28. Can you state, roughly, the streets in which it would have been preferable to have open cut? All beyond the line of Bent-street it would have been preferable to have open cut.

29. Which side do you mean? All to the north of Bent-street.

30. Do you think any of the sewers to the south of Bent-street, in Elizabeth-street, for instance, and Castlereagh-street, could have been open cut advantageously? I think Castlereagh-street has been open cut.

31. Since Mr. Bell took charge? Since Mr. Bell took charge—previous to that, part of it.

32. Speaking of the sewerage completed up to the time of your examination, and which you understood had been constructed under Mr. Rider's supervision, do you think in other streets where tunnelling has been resorted to, it would have been better, that it would have been practicable, and without any great inconvenience to the public, to have open cut? I think where these advantages existed, open cut ought to be resorted to.

33. And that it would have been cheaper? It would have been cheaper.

34. Do you believe that arrangements could have been made by which the system of open cutting could have been carried on without any great inconvenience to the inhabitants? Yes, by not opening too great an extent of ground at one time.

35. Your belief is that it would have been better, with the view of constructing the works soundly, and of diminishing the cost, that open cutting should have been more extensively resorted to than it has been? Open cutting is always the rule, as the work can be better performed.

36. *By Mr. Lang:* In speaking of those places where it would have been better to have open cut than to tunnel, do you not think it would have been dangerous to life and property, and attended with great inconvenience to the inhabitants to have open cut in those places where there was rock lying below—I think you stated in your report that this was the case in Macquarie-place? Where the streets are narrow and the traffic great, it is more desirable to tunnel.

37. In stating there are many places where you think open cutting might have been resorted to, do you keep in mind that in many places there might have been rock before you got to any depth? I think, generally speaking, there would not have been any great obstruction with reference to rock.

38. *By the Chairman:* Supposing you had met with rock, and this had been met with some ten or fifteen feet below the surface, would it then have been safe to have blasted the rock carefully in open cutting? That would have depended upon the width of the street and the traffic. Macquarie-place might have been blasted without any great risk, towards Bent-street; they might have blasted there without danger.

39. That is the rocky part between Bent and Bridge-streets? Yes. The works have been done with open cutting in some places where the rock is under ground. As you get towards the outlet, the rock is chiefly to be found in tunnelling at about eight or ten feet deep.

40. Will you have the goodness to turn to page 141 of the final Report of the late Committee, and also to pages 5 and 6 of the Return laid on the Table of the Assembly on the 20th of August—would there be any difficulty in ascertaining correctly the quantity of brickwork executed, for instance, in the sewer in Macquarie-street, from fortnight to fortnight? None, whatever, if there were proper supervision.

41. Could there be any difficulty in ascertaining the quantity of lineal feet tunnelling in rock? None whatever.

42. Or in ascertaining the number of junctions that occur in a sewer, or whether there are any junctions? None.

43. To a person who is supposed to go down the sewer once a fortnight, and who has the work under his personal supervision? None whatever, supposing the person to know what a junction is.

44. Supposing him to be an Assistant Engineer, he would then be competent to measure the brickwork, the driving in rock, and to know a junction? There would be no difficulty whatever.

45. Then can you understand, turning to the pages in the Report, and in the Return to which I have referred, how any Engineer could certify, on the 25th of October, that there were

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131 rods of brickwork, when it is found, on the 4th of July, that the quantity is only 85 rods? It is impossible. I cannot understand how it could be without some error in the computation.

46. Can you understand how any person professing to be an Engineer, measuring fortnight after fortnight, could make such an error, assuming that he made a personal examination? I cannot; it is presumed he would have an Assistant Engineer with him to check the entries.

47. These measurements were made by the Assistant Engineer, who had, or ought to have had, with him men competent to assist in making these measurements? I cannot understand it.

48. Would he be justified in making these measurements without having men that he could rely upon to assist him to make them correctly? He ought to have had them.

49. Do you think he would have been justified in giving a certificate, upon which the Commissioners would make a payment, without having the means and appliances of making a correct measurement? I do not see how he could certify to any such documents without he was confident they were correct.

50. With regard to the driving in rock,—on the 25th of October, it is certified that there are 2,903 feet driving in rock, while, as you will see from the return on the 4th of July, there were only 2,545 feet certified as having been executed? Yes.

51. Can you account for that error? I cannot understand how these differences could arise.

52. As a professional man, you cannot understand how errors of that kind could occur? No.

53. If a man professing to be an Engineer had used the most ordinary care? No, I cannot; and I have had a great deal of measurement work performed under me during the last twenty years. My course has been, in order to satisfy myself, for my assistants and myself to measure; and I have then had an account from the contractor, by which to check my own measurement, both parties being distinct, and taking their own measurements.

54. As a matter of precaution, and for your own security, you have called upon the contractor to send in his own statement of the work executed, from time to time, to act as a check upon your own measurements? Yes; it is the custom of the department.

55. Do you think it would have been an advisable, if not a necessary, arrangement, that the Commissioners, or the Engineer, should have taken such precaution with their contractor? It is the practice with all the Ordnance establishments at Home and abroad.

56. Supposing they had taken this precaution, of calling upon the contractor to send in, from fortnight to fortnight, his computation of the actual amount of work executed, would it not have enabled them to have tested the accuracy of their own Engineer's measurements? It would have afforded them the means of checking them.

57. Would it not have had this advantage—supposing there had been any fraudulent practice going on—on that assumption, would it not have committed the contractor to complicity in it—would it not have committed him to his own measurement? No; it would simply have shewn the difference or error.

58. I will put a case, for the sake of argument. Supposing the contractor and Engineer had agreed to charge for more work than had been executed, if the Commissioners had made a rule of calling upon the contractor to send in his charge for work executed, with his measurements, would not the bill or voucher sent in have committed him to the charge made for the work done, more than if the Commissioners had been satisfied simply with the certificate of their own Engineer? Quite so; if the engineer had connived with the contractor—

59. They would have been equally liable to pay? They would.

60. But in the one case they would solely have paid on the Engineer's certificate, to which the contractor had not been committed, while in the other case, if the contractor sent in a bill charging the same amounts, that would have committed him to the amounts charged by him? Yes,

61. And in the event of a conspiracy, would have afforded *prima facie* evidence to the conspiracy? Yes.

62. In page 141 of the Final Report, I find 480 junctions charged for, while in the return furnished by Mr. Bell there are only 56 junction collars. I would call your attention to the fact, that it is not only in this certificate of the 25th October, but in the certificates furnished for the two or three fortnights previously, that this, or a similar error, has occurred. Now, supposing that any particular cause had led to this special error, can you account for these recurring errors, fortnight after fortnight? I cannot understand it.

63. Supposing the Engineer had been in the habit of making the measurements with any degree of care, he would naturally, on measurement, discover the errors of the preceding one? Yes, because he would take account of the whole work executed every fortnightly measurement.

64. Therefore, if the measurements had been made with the most ordinary attention to accuracy, the fortnightly measurement would have corrected any preceding error? Yes.

65. You will find, at page 141, 480 junctions charged in Macquarie-street; if you turn to Mr. Bell's certificate of the 4th July, you will find no junctions charged for, but 56 collars, which we understand to be in lieu of junctions—can you understand how any engineer could charge for junctions, where junctions did not exist at all; or, supposing that they did exist, how he could charge for 480, when it turns out, seven or eight months after, that there are only 56? I cannot conceive how he could do so.

66. It appears also, that the gross amount certified for work executed up to the 25th of October, in Macquarie-street, at page 141, is £18,703 15s.; while from Mr. Bell's examination, of the 4th of July, upwards of eight months afterwards, the amount charged for work executed in Macquarie-street, was £15,061 13s. 5d., shewing a difference in excess, certified for on the 25th of October, of £3,642 1s. 7d.—can you suggest to the Committee any reasonable cause for gross errors of this kind occurring in two or three of the principal items charged for in this street? I cannot see exactly how they could occur with proper checks, as before stated.

67. You cannot understand how any man, with the most ordinary amount of competency as an Engineer, could have fallen into these errors, time after time? I was referring to the system adopted in my own department, that of having checks.

68. Even in the absence of the checks which you consider necessary, can you account for an Engineer falling into these errors fortnight after fortnight? I do not see how he could make such errors if he understood his profession.

69. Can you understand how his Chief Engineer, having the plans which he must, or ought to have had, to carry on such works, could have endorsed these errors fortnight after fortnight? I never certify to anything in my department, without satisfying myself of its correctness with check measurements.

70. Are you aware of the plans that Mr. Bell has now in existence for carrying on this work? Yes, I have seen them.

71. Supposing Mr. Rider had had plans of that description, could he not have checked upon the plan the amount of brickwork, the amount of driving, and so on? Quite easily; he might have satisfied himself that the measurements were generally correct.

72. Do you think Mr. Rider was justified, as an Engineer, in carrying on works of this important and costly character, without having by him plans which would have enabled him to test the accuracy of the accounts sent to him from time to time? I do not think any Engineer, having his plans before him, could be justified in such errors; the measurements being simple, the errors could easily have been detected.

73. You cannot urge anything upon the Committee, which will in any way account for or justify these errors? No.

74. If you turn to the top of page 141, you will find that the work is certified for as fourteen inch brickwork? Yes.

75. *By Mr. Scott:* Upon its remeasurement by Mr. Bell, you will find it is nearly all certified as only nine-inch work? Yes.

76. Considering that there are man holes, collars, junctions, and all manner of things, how could you account for any Engineer certifying to fourteen-inch brickwork when it was only nine inch? I cannot imagine how it is possible for any person to overlook it; he must have his assistants daily to inspect it, and the section of the work, as it advanced, would shew at once to the officer visiting the work, what was the thickness.

77. You could hardly call it "carelessness," on the part of the Engineer, could you, to certify to a fact, as a fact, that which is anything in the world but a fact? No, I should not say it was carelessness.

78. *By the Chairman:* I forgot to call your attention to page 139 of the Final Report. You will find there that the Pitt-street sewer is charged for 3,577 feet driving in rock, at a charge of £16,095 10s.; if you refer to Mr. Bell's certificate, in page 5 of the Return, you will find the quantity charged as 2,790 lineal feet of tunnelling, at a cost of £12,555 15s., being a difference in charge of about £3,500, and a difference in quantity of nearly 800 feet. Do you think it at all possible that a gross error of that kind could occur? I think not; I cannot see how it could occur if the precaution I have already alluded to had been used, either by the Assistant or Chief Engineer.

79. *By Mr. Scott:* You do not approve of the mode of measurement which Mr. Bell has stated in his evidence he found in practice, for the contractor's man to hold one end of the tape, and one of the Commissioners' men to hold the other—would you approve of such a method of measuring work in tunnels? I should not; I would have the work measured by the Engineer and also by the contractor.

80. These two men in the tunnel, if they chose to do so, could act dishonestly, I presume, or either one of them, by this mode of measurement? It depends upon the class of persons employed to assist.

81. Supposing they wished to take advantage they could do so? Advantage could be taken.

82. *By Mr. Lang:* When an Engineer is engaged by Commissioners, as in the case of the City Commissioners, or by Town Corporations at Home, do they act upon his advice as to carrying out works of this kind? Of course they act upon his professional advice.

83. The entire responsibility is upon the Engineer? The professional responsibility.

84. *By the Chairman:* In regard to the character of the work, do you consider that, upon the whole, the work has been well executed, and that the materials are good? I think the brickwork throughout is well done, and the quality of the bricks is good. In the Report it is stated that the cementing in some parts is indifferent, and I believe the contractor was called upon to make it good. Some part of the work in Bridge-street was composed of rather indifferent quality of bricks; that is to say, not so good as the others, but not so bad as to be condemnable; with the exception of that part in Bridge and Pitt Streets, they are good.

85. When the defects pointed out in the Report are remedied, the work will be thoroughly sound, and likely to be durable? Yes, providing the repairs be done; but it will be difficult to make the cementing good, because it will not be easy to keep the sewers dry while the work is being done.

86. The Committee understand from Mr. Bell, that he has caused a chase to be made at the bottom of the sewers to carry off the moisture, and to enable the rendering to be done properly? If that be done the cementing may be made good. That is the only mode by which it can be done.

87. You think when these defects are made good, the work will be thoroughly sound and durable? Yes.

88. Have you examined similar works at home? Yes, although not to a great extent.

89. Are you prepared to say, that when these works are completed, they will be as good as those you have seen at home? Yes, they will be quite up to the average character of similar works at home.

90. You have every reason to believe, from the quality of the work and of the materials, that the work will be satisfactory? Yes, from the appearance they show. I should be much

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Esq.

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Esq.  
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- much better prepared to give an answer if I had seen the works as they were going on, but from what I have seen I should say they are similar to the works I have known done at home.
91. *By Mr. Gordon:* How would you characterize the system of certifying, week after week, that the brickwork was fourteen-inch, when it really was only nine-inch—the Engineer certifying, and the contractor receiving pay at that rate? I cannot say, indeed, how he could certify, unless he placed confidence in his assistant, that the works were carried out according to contract.
92. If the contractor were receiving payment for fourteen-inch work when he was only performing nine-inch brickwork, how would you characterize that? Either that the contractor or his foreman must have known it, if they were at the measurement of the work, and that the contractor must have been receiving payment for work when the work was not there.
93. Would you not suppose that a contractor, performing certain work, must have known by the quantity of material put in, as well by his own instructions, whether it was fourteen or nine-inch work? He ought to have known this; but he might have taken the measurements without examining them himself; he might have taken the measurements of the Engineer or the party employed.
94. If the Engineer gave a certificate that the work was so much fourteen inch brick work when there was only nine inch, and knew that the contractor was receiving payment for fourteen inch, would that be honest or dishonest? I cannot imagine how he could but have known the difference of the work.
95. You could perhaps understand a mistake for one week, but when week after week, in September and October, it was repeated, I suppose you would say it could not be a mere mistake? If the Contractor had confided in the parties who measured the work, and had been satisfied with several of the first measurements he might have subsequently accepted the measurement of the department, and have had no other check upon his work.
96. How would you characterize the conduct of the Engineer in that case? I cannot conceive how such errors could possibly exist if the work were measured and checked in a proper manner.
97. Would you not suppose it was more than carelessness if these certificates were given week after week through some months—must there not have been some other reason for it? It might result from carelessness.
98. You think these could not have been mere mistakes so repeatedly? I should be sorry to impute dishonest motives, without being thoroughly aware how the measurements were taken; whether in the presence of the contractor, or his assistants, or by whom.
99. Would you suppose it would be incompetency? I cannot say so; I am not acquainted with the parties employed.
100. I should be sorry to impute dishonesty, but I wish to have your opinion, as a professional man, as to what could be the cause of this? I cannot say how it could be, if the measurements were properly taken, with ordinary care, and with the knowledge of the Engineer himself.

FRIDAY, 12 DECEMBER, 1856.

**Members Present:**

MR. EGAN,	MR. OXLEY,
MR. GORDON,	MR. PLUNKETT,
MR. JONES,	MR. ROBERTSON,
MR. LANG,	MR. SCOTT,
MR. WILSHIRE.	

RICHARD JONES, ESQUIRE, IN THE CHAIR.

William Boughton Rider, Esquire, C.E., called in and examined.

W. B. Rider,  
Esq.  
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- By the Chairman:* You are, I believe, a Civil Engineer? I am.
- You held for some time the appointment of Engineer to the City Commissioners? I did.
- Will you state to the Committee about what date you were appointed? The date of my appointment was the 27th of January, 1854, or the 17th.
- It was in January? Yes.
- You were appointed more especially, I believe, to take charge of the sewerage and water works, then about to be undertaken by the City Commissioners? That was the purport of my appointment.
- You remained in the employment of the Commissioners up to what time? I think the middle of February, 1856.
- Will you be kind enough to state to the Committee what causes led to your retirement from your office of City Engineer? Perhaps you will believe me when I tell you that I have not the slightest idea, nor have I taken the trouble to ask.
- The Commissioners, the Committee believe, dispensed with your services? They did.
- Did they state on what ground they dispensed with your services? They did—for some trivial matters that were then in abeyance.
- In reference to what? Some trifling matters of a local character, such as reporting upon some letters with reference to some drains, or something of that sort.
- When you were appointed as City Engineer, what steps did you take in reference to the City Sewerage works; what were your first steps in reference to the work? The first step I took was to produce a trigonometrical survey.

12. Had the trigonometrical survey been carried on prior to your assuming office? No; I W. B. Rider, Esq. commenced it immediately on my appointment to office.
13. Having carried that survey up to the point you thought requisite, what course did you take? I adopted my levels and sections for the necessary sewers of a portion of the City. 12 Dec., 1856.
14. In the portion of the City now known as section 1? Yes.
15. Before calling for tenders, did you cause any examination of the ground to be made through which the sewers in section 1 were to be carried? I caused no examination; but I made, as I imagined, every necessary inquiry from persons qualified to give that information, as to the probable nature of the strata through which I should have to execute the work.
16. You made no borings, and took no actual steps yourself, to ascertain the character of the ground through which you would have to carry the sewers? I did not, nor did I think it necessary; it would be involving an expenditure which would not influence the result.
17. How could you form an opinion of the probable cost until you knew the character of the ground through which you would have to go? The estimate was only an approximate one as to the probable portion of rock, and the probable portion of soil.
18. Do you not conceive that it was absolutely requisite, in order to enable you to form a reliable opinion, that you should ascertain the character of the ground through which you would have to carry the sewers? No, I do not.
19. Without such a knowledge of the ground, how could you possibly be in a position to determine the comparative eligibility of tenders that might be sent in, in which the rates for different kinds of work might materially vary? The comparative eligibility of tenders was all calculated upon the same data.
20. Such data—the data upon which you went was a mere suppositious one, as to the character of the ground through which you would have to pass? Not exactly suppositious; because, I repeat, that I had made every requisite inquiry for the purpose of obtaining, as nearly as I could, the probable amount of soil and rock. If I had made borings through the whole length and breadth of the section, it would have involved considerable expenditure and delay, and would have terminated in the same result as though the examination had not been made.
21. But supposing you had taken these steps, had made borings to ascertain the character of the strata through which you would have to carry these sewers, and supposing also that the tenders which were sent in, in reply to your advertisement, varied materially in the charges for cutting through soil, cutting through rock, open cutting, and tunnelling, would you not have been in a better position to have determined which would have been the best tender to adopt, under your actual knowledge of the state of things? I do not think so, one bit.
22. Do you not think that, having taken steps to ascertain the nature of the strata, you would have been in a better position to judge how much tunnelling you would be likely to require, and how much open cutting? I should not have arrived at any different conclusion than I have already done.
23. You feel satisfied that you took all necessary preliminary steps to justify you in entering upon the work? I am satisfied I did.
24. Having taken these necessary preliminary steps, you then, I presume, called for tenders? The Commissioners called for tenders, upon the specification then made, and a schedule of prices.
25. Were you called upon to make an analysis of those various tenders? I do not know that I was called upon to do it, but I did it as a matter of course—I did make an analysis.
26. In order to determine for the Commissioners which was the best tender to accept? It was a comparative analysis between the different tenders.
27. To enable the Commissioners to judge which was the most advantageous for them to accept? Yes; but my estimate had no reference to that.
28. As I understand, you made the analysis in order to place before the Commissioners data to enable them to say which tender they would accept? I can hardly put that construction upon it. I made an estimate to ascertain the comparative merit of my estimate with the others, but not to enable the Commissioners to form an opinion between my estimate and the tenders that were sent in.
29. I think you misunderstand my question. I am aware that you submitted an estimate to the Commissioners, but apart from submitting this estimate of your own of the probable cost, were you not called upon, and did you not make an analysis of the tenders sent in, to enable the Commissioners to judge which it would be their duty to accept? Yes, I did.
30. The analysis which you handed in to the late Committee, on the 17th July, 1856, and appended to your evidence, I presume the Committee may take to be correct? Yes, that is the analysis I made.
31. How did you make this analysis—on what data—or on what presumption did you proceed to arrive at these conclusions, as to the cost of the various sewers, under the tenders sent in? Alluding to the question you previously asked me, I made a calculation, in the first place, on the basis that there would be one-third rock and two-thirds soil, through which either to tunnel or to excavate; I was not aware by which method I should execute the work; they are all calculated from the same data, and all have the same bearing one with another.
32. You went upon the assumption, that taking the whole section, the relative proportion would be one of rock to two of soil? One of rock to two of soil.
33. Did you at the same time make any estimate of the probable extent of tunnelling, and the probable extent of open cutting? I did not, because it entirely depended upon local circumstances, which would determine the method of carrying out the work.
34. Was there any difference in the charges of the various tenderers for open cutting and tunnelling? I believe a considerable variation with regard to tunnelling, and open cutting, as well, in fact as to the whole of the items.
35. From recollection, can you state which of the persons tendering undertook to do the open cutting at the lowest rate? I cannot, from recollection.

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36. Can you state which were the highest charges for tunnelling, and which the lowest? I believe that Mr. Randle's was the highest for tunnelling.
37. Can you inform the Committee whether Mr. Randle was at the same time the lowest for open cutting? I can hardly tell; but I believe there is a copy of the schedule here.
38. I presume, from the fact of his tender being the highest for tunnelling, that he must have brought down his charges for open cutting, in order to make his tender lower than the others? I cannot tell you what the basis of Mr. Randle's calculations was.
39. Mr. Randle was the person who obtained the contract? He was.
40. When the Commissioners entered into a contract with Mr. Randle, was there any specification attached to it? There was a specification, or rather conditions of contract, which included the specifications published previously to the tenders being called for, and each party had a copy of the specification with the schedule of prices previous to the tenders being accepted.
41. Did the specification form a binding part of the contract? It did.
42. It forms no portion of the contract as given with your evidence on the 17th of July—there appear to be general conditions of contract and also a schedule of prices, but, so far as I see, no specification? So much of the specification as was actually required for the work is contained in the general conditions of the contract. I may repeat what I repeated to the Committee last year, that these conditions of the contract were taken from, and were precisely the same, as the conditions of contracts for sewers in England, with which I had been connected for years.
43. Is it not usual to attach specifications to the general conditions of contracts? It has not been thought necessary by the Board of Sewers at home to attach any specification in addition to the conditions of contract, which contain a sufficient amount of specification to enable the work to be conducted properly.
44. In the schedule of prices appended to your evidence on the 17th of July, I see no prices included for work of a mixed character? There are not any.
45. But simply for rock and soil? Simply for rock and soil.
46. Would it not have been better that there should have been included in the schedule of prices, prices for ground of a mixed character, specifying at what rate it should be paid for, according to the proportion of rock and soil? It is a question whether it would or would not; it would have done no harm, and I conceive it would have done no good, inasmuch as you would have had to describe many different proportions; you might have had one-eighth soil, and seven-eighths rock; or one-sixth rock and five-sixths soil; in fact you might have had an interminable list. In contracts of this kind, it is generally left to the discretion of the Engineer or the Resident Engineer, whose duty it is to discriminate what proportions are fairly chargeable to each, and in the certificates you will find it so inserted, half rock and half soil, or a quarter rock and three quarters soil, and so on.
47. Then I understand you to say that you consider it is not desirable to include in the schedule of prices, prices of ground of a mixed character, but that it is better to leave the matter to the discretion of the Engineer to decide, from time to time, the character of the ground? Yes, as the strata are met with.
48. Will you turn to page 13 of the Report containing the general conditions of the contract, and direct your attention to the two last paragraphs but one in that page, in reference to the contractor delivering weekly accounts and daily vouchers. Will you state what construction you put upon these conditions, as to the contractor delivering his weekly accounts to the Commissioners, and daily vouchers of day and jobbing work? The first part of it enables the Engineer, should it be deemed necessary, to compel the contractor to do so, but it is not absolutely necessary, for we know by our fortnightly measurements how the work has been proceeded with. In case of any misunderstanding with a contractor in works of this sort, it is necessary to have a hold upon him, and to be in a position to compel him to do it if necessary. But, during the time I had the sewers under my superintendence, I did not consider it necessary.
49. You did not consider it necessary to advise the Commissioners to enforce this condition? I did not; for, as far as the work went on while I was there, there was no misunderstanding with the contractor.
50. Do you not think it would have been a more business like arrangement if the contractor had been required to furnish every fortnight his charges for the work executed? I do not see that it would have amounted to anything in opposition to our own measurement.
51. Would it not have enabled the Commissioners to have ascertained, from time to time, how your estimate of the work done, and the contractor's agreed with each other? You must understand that the contractor did furnish an account of the work done.
52. In the nature of a bill rendered? In the nature of a bill rendered.
53. We understood from the Commissioners that these fortnightly accounts were not furnished during your time? They were furnished to the Commissioners every fortnight.
54. A list of the work executed—so many feet of brickwork—so many feet of driving in rock, specifying the amount done from fortnight to fortnight? It was done in this way,—Mr. Randle's party measured with the Assistant Engineer, Mr. Mais; they each agreed. They went through the quantities together. We had a copy of Mr. Randle's account of the work, and he had an account of ours.
55. Do I understand that Mr. Randle handed to the Commissioners, each fortnight, an account of the quantity of work he assumed he had done during that fortnight? He did. Whether it was every fortnight I am not exactly aware, for the payments were only on account, but that was the general system adopted.
56. He handed in these accounts fortnightly, or thereabouts? Yes.
57. *By Mr. Plunkett*: To whom? To my officer.
58. Did you forward the accounts he furnished to the Commissioners? These accounts that were forwarded to me, as agreed to by the resident Engineer, were re-made in the shape of certificates,

- certificates, and they were handed to the Commissioners for their inspection, previous to Mr. W. B. Rider, Esq. Randle receiving payments on account.
59. My object in asking this question is to know whether the original account sent in by Mr. Randle went before the Commissioners, or whether they went to your office and remained there? The original memorandum of Mr. Randle remained in my office. 12 Dec., 1856.
60. Then the Commissioners were satisfied with merely your certificate? That was all I had to send them.
61. They knew nothing of the accounts sent by Mr. Randle to your office? No; at least they might have seen them, but it was not in the form of my office to deliver them to the Commissioners.
62. *By the Chairman*: Did these fortnightly accounts of Mr. Randle ultimately pass into the possession of the Commissioners? I am not aware whether they did. I left them in my office; but whether they found their way into the Commissioners' office, I am not aware.
63. Then Mr. Randle furnished a fortnightly account, which you used to see whether it tallied with your measurements, but you are not aware whether they were furnished by you to the Commissioners. You believe, however, that they were left in your office, and are now in their possession? Yes; I believe they were left in my office.
64. *By Mr. Plunkett*: Who signed this original account; did Mr. Randle when he sent it in? It was signed either by his Mining Engineer, or by some party who was appointed by him to measure the work.
65. Did he sign them himself? I do not think he did.
66. Are they forthcoming now? I am not aware.
67. Did you destroy them? No.
68. Were they in the office when you gave it up? Yes.
69. *By Mr. Gordon*: Were they filed in the office? No; it was not thought necessary to file memoranda of this sort.
70. These, as I understand, were accounts rendered by the contractor? No; I wish you to understand that they were admeasurements merely. The Commissioners would not understand them. From these admeasurements of Mr. Randle, or of the parties who conducted them for him, the admeasurements in the certificates were agreed on.
71. For your own safety or satisfaction, was it not necessary to file them, so that you could refer to them at any time? We had our own measurement book, in which the measurements were entered, so that what Mr. Randle sent in was immaterial.
72. *By the Chairman*: Can you describe to the Committee in what form these memoranda of accounts were supplied by Mr. Randle to you? They were on foolscap paper, lined.
73. How were the items specified—were they drawn up in anything like the form of your own certificate? No; they would contain the quantities generally.
74. Were they more detailed or less, or was the paper drawn up in a different form? They were drawn up in a different form as the work was measured.
75. They would be confined simply to the amount, instead of including the value of the work, as these appear to do; they would simply include the amount done during the fortnight? The work was measured from the commencement each fortnight; at least it ought to have been, but I believe it was not.
76. Did Mr. Randle's account, in that respect, agree with the certificates as furnished here? Yes.
77. The account described the whole of the work done during the quarter from the commencement up to the date of the measurement? Yes.
78. On reference to these accounts, could it have been ascertained what charges Mr. Randle made for the work in any particular sewer, up to any particular date? By reference to the schedule of prices it could.
79. By reference to his account, could it be ascertained what extent or quantity of work he charged for—for instance, could you by referring to these accounts, ascertain that in the main sewer there was charged for 19 cubic feet of cutting in rock, on the 25th of October? Yes, it would have specified that.
80. It would specify the work? Yes.
81. Not carrying out the amount? It was not moneyed out.
82. But the quantity of work was generally stated? Yes.
83. Which he considered he was entitled to be paid for? Yes. Further, I may state, that Mr. Randle not only went through the work with us every fortnight, but that he made a separate measurement in the intermediate week, for the purpose of his own payments.
84. *By Mr. Plunkett*: Did he personally go through the work? He relied upon others; it was not his usual practice to measure the work.
85. Will you explain what the course was, you allude to, that he took to ascertain the correctness of the measurement? Mr. Randle used to receive advances from the Commissioners each fortnight.
86. *By the Chairman*: Mr. Plunkett, I think, wishes to know what course Mr. Randle took to satisfy himself as to the correctness of the measurements before he paid his men? That I do not know.
87. *By Mr. Plunkett*: Will you state to the Committee what course Mr. Randle took, as you were about to explain? He simply measured the work in the same places as we did.
88. Without any assistance of yours? Yes.
89. He measured the work entirely independent of you or your assistants? Yes.
90. Are you speaking of your own knowledge, or from what you have heard? I have seen them several times in the act of doing it.
91. Who are the persons you have seen? Mr. Storey is one, and Mr. Parker is one. I have also seen the foreman of the gangers on the work. There were several persons, and the hands were changed at different periods.
92. Did he accompany them himself? I am not aware.

W. B. Rider, Esq. 93. *By the Chairman:* Will you describe to the Committee what plans, drawings, and sections you had when you entered upon the sewerage works? None at all.

12 Dec., 1856. 94. Did you not consider it necessary to have these drawings and plans before you, before entering upon the work? I made all that I considered necessary before the commencement of the work.

95. Will you describe to the Committee what these plans and sections were that you considered necessary? Longitudinal sections shewing the surface of the ground, and the depth to which the sewer would have to be constructed.

96. And these were the only drawings, or sections, that you considered to be necessary at the time? Not the only drawings; there were the usual necessary working drawings of the sewers to be constructed.

97. Were the sections and plans you had, sufficient to enable you to mark and check off the progress of the work? At that period I was not called upon to produce drawings of that character. Subsequently it was done, not that it is usual to mark measurements upon drawings, it is of no benefit, for the measurements themselves are quite sufficient for that purpose.

98. Would it not have enabled you to have explained to the Commissioners, from time to time, the progress of the work—the quantity of work executed in each of these sewers, if you had had these plans? I do not think the explanation would have been at all more explicit if these drawings had been produced; because the drawings would only have explained the number of feet executed, and the measurements would have done the same, and did the same.

99. Had you any complaints from the Commissioners as to the state of your office at the time you left—as to the state of the papers or plans? No, I had not.

100. At the time you left the employment of the Commissioners? No. I volunteered any assistance I could give to my successor, Mr. Bell; and I have, since I left the Commissioners, rendered any assistance in any matters that were in abeyance, and necessarily in abeyance.

101. In Mr. Bell's letter to the Commissioners, dated 28th March, 1856, he says,—“In taking office, I found the Sewerage Works in these streets in a very considerable state of advancement, and it was only reasonable to expect that I should find in the office a general plan, shewing the works intended to be executed on the whole section, and working drawings of the same, shewing how they were carrying and to be carried out in detail; but this was not the case. Your Engineer's office and papers were in such a state of derangement, that it was with the greatest difficulty and trouble I could obtain a correct knowledge of the proceedings, or learn the actual state of the works which were executed.”—Is there any explanation in reference to that you would like to offer to the Committee? I can, with every deference to Mr. Bell. I have not seen this report contained in his letter. He states he found it in a very considerable state of advancement, and it is only reasonable to expect that he found in the office a general plan.

102. In the succeeding paragraph he states the sections he did find? I do not understand what he means by the general plan, beyond that which he really did find—that was a plan attached to the sections, shewing the line of the sewers along each street; it was not necessary to show the working details of every yard of work from beginning to end. There were plans that were quite sufficient for the purpose of carrying on the work.

103. With regard to the working drawings that he speaks of, shewing how the work was going on, and was to be carried on in detail—did you leave any such working drawings? I did leave working drawings of such portions of the work which varied in construction in different parts of each street. With the exception of the junctions, the work is precisely of the same character throughout, varying in the thickness of the brickwork only. With this exception, the brickwork is the same from one end of the street to the other; and this variation in the work was always noted on the sections—there were full and ample drawings for every engineering purpose.

104. Have you any justification to make of the statement made in the next paragraph, as to the state of derangement in which your papers were left, or were found by your successor? I really can form no idea why he could state they were in a state of derangement, for I endeavoured to have as few papers as were necessary for the proper conduct of the business. I am not aware that they were in a state of derangement, for it was the business of the parties I had about me to see that they were in a proper state.

105. I may state that one of the Commissioners (Mr. Rae) stated also, that one of the reasons that led the Commissioners to dispense with your services, was the very unsatisfactory state in which your papers and memoranda were kept in your office? Perhaps I may have laid myself open to the charge that I did not leave the papers, or that I did not, perhaps, conduct the business of that office, with the scrupulous care that it ought to have been conducted. There are few Engineers' offices which you will find very carefully conducted. But the remarks may have been with regard to attending to and entering up correspondence of an unimportant character; if so, there may have been some remissness. These are the papers to which they may allude, and I may plead guilty to the charge. I found the duties on entering the office very onerous—not only connected with the existing and intended sewerage, but every trivial matter connected with the city was the subject of a letter, and it is easy, after there having been a great accumulation of papers of this character, for gentlemen to say they found the papers in a state of derangement; but I do assert this, that the papers connected with the sewers or waterworks, over which I had control, were not in a state of derangement.

106. What arrangements were made under your direction, for supervising the sewerage works while they were being carried on—for taking care that no material of bad quality was used, or workmanship of an unsound character allowed to be put in them? In all engineering works there is an officer appointed—the Resident Engineer, with such assistance as he may require. The Resident Engineer in this case was Mr. Mais, whose duty it was to see that all



all the details of the works, as I had designed them, were carried out in their integrity; he was appointed for that purpose, and it was his duty to see that no improper material was put in the work, and that the work was carried out as it had been arranged and devised in the office.

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107. You conceive it was Mr. Mais' more immediate duty, as Resident Engineer, to see to the supervision of the works? It is the especial duty of the Resident Engineer in all works.

108. The Chief Engineer having decided generally on the plan of the works to be adopted, his Assistant or Resident Engineer is the person charged specially with the duty of constructing the work? Yes.

109. That is understood to be the special purpose for which he is appointed? Yes, it is.

110. Did you consider, at the time these works were carrying on, that sufficient provision was made to secure their execution in full accordance with the contract? It was his duty to have reported if they were not so. After the work progressed, and became more extended, and, being made aware of that fact, of the insufficient supervision, I endeavoured to get more, but I had, at that time, extreme difficulty—in fact, I could not succeed for some length of time.

111. You became conscious, soon after the work commenced, that the supervision was not sufficient for the practical fulfilment of the contract? I think, if the duty had been performed with proper energy, the supervision was sufficient to see that the work was being carried on according to the contract.

112. That is, that the assistants under his control were sufficient, if he had managed with sufficient energy, to carry out the work efficiently? For some portions of time; as the work extended, he did require additional supervision, and that additional supervision was taken on as soon as it could be obtained.

113. Will you now be kind enough to say how your fortnightly measurements were made? That is a matter which was left entirely to Mr. Mais. It is not the business of the Engineer-in-Chief to identify himself with admeasurements. Mr. Mais was the sole party to whom the admeasurement of the work was entrusted.

114. Then I understand you to say that the measurements were made by Mr. Mais? Yes, that it was his more special duty.

115. To see that the measurements were made accurately? To see that the measurements were made accurately; that is, the fortnightly admeasurements.

116. Did you sign these fortnightly certificates which Mr. Mais furnished to the Commissioners, and upon which all the payments were made? In the ordinary course I certified to them, bearing, as they did, Mr. Mais' signature.

117. Before you signed, was it not necessary to take steps to ascertain that they were correct, or did you take steps to ascertain that they were correct? I presumed they were correct. I repeat, if I had taken steps to ascertain that they were correct I should have had to go through the work myself, which it is not usual, in the position I then occupied, to identify myself with.

118. Is the Committee to understand that you did not, from fortnight to fortnight, go roughly through the works, to satisfy yourself that the measurements were correct? Not every fortnight; but at the termination of each three months I did, with other assistance.

119. Did you take any other steps to satisfy yourself that the measurements certified by Mr. Mais were correct, by comparing his measurements with the general plan? No, I did not. Any description on a general plan could only be derived from admeasurement, and my duties did not demand my going into matters of detail, except at stated periods.

120. Then of what use was your signature to these certificates, if you took no means of satisfying yourself that they were accurate? As a matter of course; they never presumed to be more than approximately accurate.

121. Sufficiently accurate to justify the Commissioners in paying ninety per cent? They have never paid seventy per cent.

122. To justify the Commissioners in paying the amount they were required by the contract to pay? I certainly had knowledge of what was going on; I could not say within a few feet what work was executed, without reference to the measurements, but, from knowledge of the ground, I could understand to what extent the work was completed; but beyond taking the measurements for each three months, I did not identify myself with the measurements to ascertain the correctness of the fortnightly admeasurements.

123. *By Mr. Gordon:* Did you compare Mr. Mais' measurements, as stated in the certificates that you signed fortnightly, with the account that was sent in by the contractor, to see that they corresponded, before you sent them in? With the contractor's they did correspond; it was their business, in some degree, to make them correspond if there was any difference in the items, because the contractor went through them, with the Assistant Engineer, to agree, as is the usual course, to the admeasurements.

124. Then the contractor and the Engineer made up their accounts together? They did not together; each made them up separately.

125. Then in what way do you say they did make them up to agree? It was the business of Mr. Mais entirely to measure up the work fortnightly, and go through with the contractor, and agree to the measurements, to prevent any misunderstanding; it is the usual course in works of this sort; for twenty-three years I have always done it myself with the contractor, and therefore did not feel myself called upon to adopt any other steps here.

126. Do I understand that the account that was rendered each fortnight by the contractor did correspond with the measurements of the Resident Engineer, and that he did ascertain that before he signed the certificate? That I do not know; I do not say it did agree; but the contractor, on his own behalf, measured to see that the amount measured by the Engineer was correct.

127. Did you then put the two accounts together and see that they corresponded, when you signed the certificate? No; the certificate of my assistant was all that I required.

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128. Did they in fact agree? I do not know whether they did or did not; they might have agreed or disagreed.
129. I understood you, in answer to my first question, to say that they did agree? I only spoke then with regard to the measurements. Mr. Randle sends his Engineer to measure with the Resident Engineer, and if there is any difference of opinion, it is spoken of on the ground, and, as a matter of course, they agree, if they can, before leaving the ground.
130. Then the account sent in to you by the contractor, and the memorandum of the measurement by the Engineer corresponded? They may have varied sometimes; but, I presume, they generally agreed.
131. You do not know that of your own knowledge? I do not.
132. *By the Chairman*: Do you know what process was adopted by Mr. Mais in carrying on the fortnightly measurements—who assisted him? Generally a party from the office.
133. One of your own people? Two or three of our own people, because it is a matter of some trouble; and there was always a party from Mr. Randle's office.
134. Did the party from Mr. Randle's office take any part in the measurement of the work—did he assist by holding the chain? No, certainly not to my knowledge; he might have done it, but it was not usual.
135. Were you ever present at these fortnightly measurements that were made by Mr. Mais? Not throughout; I have been to places where they have been measuring.
136. At those times when you have seen them has it come within your observation that one or two of Mr. Randle's men were assisting by holding the chain or tape, or in any other way? I can hardly charge my memory who held the tape; I believe one of the Assistant Engineers from my office generally took the admeasurements with Mr. Mais; but whether they were assisted by Mr. Randle's men, or whether there were men employed specially for the purpose I am unaware.
137. Would you consider it a proper course for the contractor's men to assist your Engineer in his measurements? I should not consider it an improper mode at all, without imputing fraud in the party; in fact, both parties must be cognisant of the fraud in such a case.
138. Supposing the contractor's men were holding the tape at one end, and the Assistant Engineer with his men were at the other, could not the contractor's men, without the knowledge of the Engineer, mismeasure the sewers—I presume they are dark generally? It is possible that in measuring such a thing might occur.
139. Or, in measuring the brickwork, could it occur in taking the length? The same fraud could be committed in measuring the length of the brickwork.
140. Knowing, as you would from the sections, whether the brickwork was nine inch or fourteen inch? Yes.
141. Did you ever satisfy yourself that the means taken by Mr. Mais, as your agent, for ensuring accuracy in the measurements, were sufficient? I did.
142. What were the means you took in order to check Mr. Mais? An Engineer at the waterworks at Botany, a well qualified party, as I imagined—Mr. Hooper—was sent for, as he was strange to the work, and had the whole work re-measured.
143. At what period did this re-measurement take place? I think in the month of September or October, last year.
144. This check that you took was not a regular periodical one, but only on some particular occasion? It was the three-monthly measurement; there was not a sufficient amount of work completed, and the three-monthly measurement was delayed; it was the measurement for September.
145. It was the quarterly measurement for the 30th of September? Yes; it was made in October; I directed him, and took the superintendence of the major part of the work myself, at the time this measurement was made.
146. Supposing any ordinary measures were adopted by Mr. Mais in carrying out his fortnightly examinations, can you understand how any serious error could occur in any of them? I cannot see how the error to which my attention has been called could have originated with him; it was extremely culpable on his part, particularly in Macquarie-street, where he returned one hundred and thirty-one rods of brick work, and in the first measurement I took of the work, I reduced it to ninety. Perhaps he was aware of having committed the error. I see he gradually, fortnight after fortnight, reduced that work. But, without reference to his admeasurement at all, my measurement brought it as near to the actual amount of work then completed as it was possible, under the circumstances, to do, the work being in progress.
147. Suppose you had had a working plan, as was spoken of just now, in which, as the work progressed, it could have been marked, in the various sewers; if you had examined this plan from time to time, noted it, and compared it with Mr. Mais' fortnightly certificates, could you not, from an examination of that plan, have detected any serious error in the driving? No, because that definition on the plan must have been made from the measurement certificates.
148. Would you not, from your own sections, know what was the length of brickwork in Macquarie-street, and the thickness of it, whether nine or fourteen inch? Yes.
149. With this knowledge from the sections, and knowing, from marking off from time to time on this working plan how much had been executed, could you not, without going down the sewer, have calculated the actual work done, to within a trifling amount—a rod of brickwork or so? This description on the section or plan must be made from actual admeasurements; you must insert on this plan, from actual admeasurements, the amount of work done, and if the admeasurement was wrong the plan would also be wrong.
150. In your section, you say, you would shew the entire length of brickwork to be executed, therefore you could ascertain from the section the extent? No, you misunderstand me; you cannot calculate the amount of work to be executed, because it varies—some is fourteen inch, some nine inch.
151. When was the thickness of the brickwork determined? From time to time, according to the nature of the strata; in loose or uncertain ground brickwork of a certain thickness is  
inserted

inserted, and until we come to it we cannot determine particularly. Local causes would affect the thickness of the brickwork. Until we come to the actual work we cannot describe with certainty on the sections the amount of work to be done. W. B. Rider,  
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152. *By Mr. Plunkett*: Who determines whether it shall be nine inch or fourteen inch work? 12 Dec., 1856.

The resident Engineer has his instructions on that head; and it is his duty to consult with the Chief Engineer on the different features of the work as they occur.

153. Was that done by Mr. Mais? Yes.

154. In what way—by writing? No, general consultation.

155. Did you give any order that would show the Commissioners that a variation took place for which you were responsible? It is usual in all works of this sort to leave it to the discretion of the Engineer to do so.

156. I want to know what the practice was when nine-inch work was given as the general rule, and it became necessary to vary it by thickening the brickwork—how was the order for the variation given, and in what way was it communicated to the Commissioners? In no way to the Commissioners; they left the responsibility entirely with myself, as it was their duty to do.

157. As between you and Mr. Mais, as under Engineer, how would you be reminded of giving an order authorizing any particular variation—was there any writing? The variation at this time consisted only of two points, one was where loose or uncertain ground appeared, to construct fourteen-inch work; and the other was, if the ground was soft to insert concrete or asphalt to secure the brickwork; those were the general orders I gave to Mr. Mais.

158. How were these carried out—when was it made known to you that the work was nine-inch or fourteen-inch, and how was your sanction given? My sanction was given to the work as the excavation was shown to me; I then gave orders for that to be filled in with nine-inch or fourteen-inch brickwork.

159. In what way? Generally verbally.

160. Then it passed out of your mind? These variations were always inserted on the sections.

161. In what way? By admeasurement.

162. Who measured? Mr. Mais.

163. You had no check upon him? I had no check upon him, except what I have before stated.

164. *By the Chairman*: Then, although you could not have ascertained from this section or working plan (if you had had it), without going through the sewers, the actual amount of brickwork or driving, was it possible for Mr. Mais, who went down the sewers every fortnight, to make errors of this nature, if he had paid proper care and attention to his duties—for instance, he certifies for one hundred and thirty-one rods of brickwork in Macquarie-street; and in the subsequent certificate the quantity is reduced to one hundred rods? I cannot conceive how he could have committed such an egregious blunder. When my measurement was made, I think I reduced it to ninety rods.

165. In the December measurement? No, I think it was some time previous to that; but I do not think it is among the printed certificates.

166. This measurement to which I have just directed your attention took place on the 25th October; then, on the 8th November, the brickwork is put down at one hundred rods, reducing it by thirty-one rods? Yes.

167. Do you attribute that diminution which is there apparent, to your having made the measurement yourself, or caused some more careful measurement to be made? No; but I forwarded to the Commissioners, during the month of October, the admeasurement in which I reduced it.

168. You will not find such a measurement here? I do not think there was; it was a measurement previous to the 8th of November.

169. You will find that in the measurement of the 25th October it is put down at the highest amount—one hundred and thirty-one rods; and if you turn to the measurement of 27th September, you will find it ninety-three rods? Yes; and I am satisfied the Commissioners had a measurement of mine, previous to the month of November, in which I returned ninety rods.

170. Am I to understand that you signed this certificate, in which this brickwork is charged one hundred and thirty-one rods? That certificate went in due course as certified to be correct by Mr. Mais. The time, after making my own admeasurements in October, was not sufficient to enable me to go through the whole calculations. They were certified by "H. Mais." In every department the head of the department signs upon the certificate of those immediately placed under him for that purpose.

171. Then you cannot account to the Committee for Mr. Mais making these repeated erroneous certificates as to the extent of brickwork executed in Macquarie-street? I cannot. I can form no idea how they occurred.

172. Have you any recollection of having specially inspected or examined Macquarie-street yourself, with reference to the brickwork and other measurements, during the month of October—yourself specially? Not myself specially; I took others to assist me; I did not carry the chain. I find the date on which I sent to the Commissioners my statement of the quantity of work executed, was collected from the 23rd to the 27th October.

173. That would tally in date with the certificate of Mr. Mais, countersigned by yourself, of the 25th October, in which the most gross errors are actually committed—that is dated 25th October—at the very time you say you sent in your certificate to the Commissioners of your more careful measurement? No, because I had not made the calculations of the quantities from my admeasurement.

174. Then, I presume, that certificate will practically embody the corrections you made on the 27th October, as certified by Mr. Mais? That of the 8th of November would.

175. Mr. Mais, I presume, could have no difficulty in ascertaining the thickness of the brickwork

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- brickwork in Macquarie-street? He ought to have known it every inch; it was his business to see the details of the work carried out as directed.
176. Can you understand how any professional man could have mis-stated, during three or four consecutive measurements, the quantity of brickwork in this street. On the 27th of September he certified to ninety-three rods of nine-inch brickwork, on the 11th October one hundred and nineteen rods, and on the 25th October one hundred and thirty-one rods of fourteen-inch brickwork? Yes.
177. How is it possible a professional man, making three measurements, fortnight after fortnight, could have committed a series of gross blunders of that description? It is impossible to account for it. He gradually increases the amount. I cannot conceive how it could have been done, unless he took wrong starting points.
178. Would that account for it? I cannot say.
179. Would he be likely to go again to a wrong place and re-measure? He might not take the trouble to re-measure the whole of it.
180. Supposing the Commissioners had paid ninety per cent, which they might have been called upon to pay by the contractor, according to this certificate ninety per cent. would have executed the whole amount payable for that work? If they had paid on that particular item it might have done so, but there was always a vast quantity of work in abeyance, which was not even measured during the progress of the work; therefore it was not likely to have overpaid the contractor.
181. But if the resident Engineer, whose duty it was to make these measurements from fortnight to fortnight, could make an error of this kind, and could repeat it, what assurance had the Commissioners that the same class of errors did not run through the whole work? Except that they were checked by persons not connected with the work at the quarterly measurements.
182. The consequence of this mismeasurement—if the Commissioners had paid according to the quantity originally certified for, at the rate of ninety per cent.—would have been, that they would have paid more than the total amount chargeable; for instance, Mr. Mais, on the 8th November, certifies to 100 rods of brickwork, while on the 25th of October, a fortnight previous, he certifies to 131 rods? Possibly they might come to that conclusion; but here is only a single item, on which appears an excess, while many other items were not even brought into the admeasurement, to the prejudice of the contractor. I am not excusing Mr. Mais in any shape or form. These fortnightly measurements, or payments on account, in all works, are never supposed to be correct, but they ought to be, under any circumstances, substantially correct.
183. Where an Engineer makes a mistake, is it not the ordinary and proper course to err on the safe side, and if he has any doubt, that he should certify rather less than more? If you take a given item into consideration, it is; but there was a vast amount of work here.
184. Supposing a resident Engineer has any doubt as to a particular item, or the items in general, would it not be the usual course to err on the safe side, and certify rather less than more, to protect his employers? No, I cannot see that it would; it is as much the duty of the Engineer to protect the contractor as the employer; it is his duty to make the certificates as correct as possible.
185. Supposing he had any doubt, I presume the usual course would be, if he erred at all, to take care he should do so on the safe side; because the contractor can make good any deficiency afterwards? It is the practice, and having been connected with many contracts for the last twenty-three years, I have always adopted it, that is, to give the contractor the advantage; if there is any doubt, in a trifling way, it is the practice among professional men at home to give the contractor the advantage; that is to say, they err on the side of the contractor if the amount is not anything particular.
186. Allow me to call your attention to another item. If you will turn to page 141 of the Evidence taken before the Committee of last Session, at the bottom of the page you will find certified 2,903 feet superficial driving in rock, £11,612, in Macquarie-street, and at the bottom of page 5, of the return of Mr. Bell, you will see there is 2,545 feet of tunnelling in rock certified for as executed up to 4th July, 1856, being a very material diminution of the charge certified by Mr. Mais, on the 25th October, 1855, the difference in the amount being some £1,400, and the difference in quantity being something like two hundred and fifty or two hundred and sixty feet? I see it.
187. Can you explain to the Committee how this error occurred? I can explain no error of Mr. Mais' in any shape; but, I can imagine how the error in the length may have caused the error in the brickwork.
188. Can you explain how the error may have arisen? Perhaps instead of measuring the work itself he took a wrong starting point on the surface, and by taking a wrong point in the street he made the measurement incorrect. I was not aware of the existence of this error in tunnelling in rock; I think the excess in brickwork may be accounted for by the excess in the length of tunnelling. At the time I made my return, between the 23rd and 27th October, I certified 2,142 lineal feet.
189. Some work was executed since that? Yes.
190. That makes the error of Mr. Mais still greater; you give the quantity as 2,142 feet while your assistant, two days after, certifies that the quantity is 2,903 feet? His certificate on the 25th October is not identical with the one I made between the 23rd and 27th, because the fortnightly payment for which the return of the 25th was made had no reference whatever to my quarterly measurement; therefore, you must not compare my measurement with Mr. Mais' certificate of the 25th October.
191. Still, if you measured between the 23rd and 27th October, and found that, in Macquarie-street, there were executed, 2,142 feet driving in rock, how is it possible your Assistant Engineer could have certified, two days after, that there were 2,903 feet? Mr. Mais was not engaged in this admeasurement of the 23rd and 27th.

192. Your admeasurement, I understand, is distinct from Mr. Mais', but still you satisfied yourself that there were only 2,142 feet of driving in Macquarie-street, while Mr. Mais certifies, on the medium day, that there were 2,903 feet? Yes.
193. Which makes the excess of Mr. Mais' certificate greater than appears by the measurement instituted by Mr. Bell, on the 4th July—it makes the error of Mr. Mais much grosser? It does; it makes a difference of 761 feet.
194. *By Mr. Plunkett*: Did you certify this on the 25th October in the usual way you have before described? Yes; every fortnightly certificate bears my signature.
195. How was it, when you satisfied yourself on the 23rd October that there were only 2,142 feet of driving in rock, that you certified on the 25th October, two days after, that there were 2,903 feet? I can hardly carry the dates in my recollection. This admeasurement was made from the 23rd to the 27th.
196. This was on the 25th? Yes, that must have been made before the 23rd.
197. You say you satisfied yourself on the 23rd October? No. From the 23rd to the 27th. I began on the 23rd and finished on the 27th.
198. Then you signed this certificate before you had completed your measurement? Yes.
199. *By Mr. Scott*: On the 27th October you ascertained that the admeasurement of the tunnelling in Macquarie-street was 2,142? Yes, on or about the 27th.
200. By the 8th November you were aware of that fact? That length, I presume, should have been known by that time.
201. How then, on the 8th November, did you put your name to Mr. Mais' admeasurement, which gives 2,727 feet? Yes. The work had increased by that quantity during the fortnight that had elapsed.
202. *By the Chairman*: Would it have been possible the work could have increased from 2,142 feet to 2,727, making a difference of 585 feet, in a fortnight? The representation by Mr. Mais in his certificate to me was that it had.
203. You relied upon Mr. Mais when you signed it? Yes.
204. Your eyes being open, on the 27th October, to the fact that there were 2,142 feet, when so short a time after you certified for 2,727 feet, did you take any steps at all to satisfy yourself that this was correct, as you must have seen before that he was incorrect on the 25th October? The incorrectness on the 25th October is rectified in the subsequent certificate of the 8th November, when, in consequence of my admeasurement, no doubt Mr. Mais discovered his mistake, and then represents that the increased number of feet had been executed subsequently to the last fortnightly admeasurement, or rather subsequently to mine.
205. You never doubted—? I did not doubt; I really had no reason to doubt, and took it for granted that the amount of work represented to be executed by Mr. Mais was correct. I do not think 2,142 feet would include all, for there was some open cutting it did not include.
206. *By Mr. Scott*: This is merely the tunnelling? The error must be as it appears, and that the admeasurement was reduced after the 25th October, in accordance with my admeasurement made from the 23rd to the 27th; and then the representation on the 8th November must be that 585 extra feet have been executed during the subsequent fortnight.
207. If you turn to page 6 of Mr. Bell's report, you will find there that on the 4th July, 1856, the quantity of brickwork then executed was only 85 rods? I can hardly understand why there is any difference in the admeasurements between Mr. Bell and myself, except to a small extent upon mere points of practice. I believe he has reduced it to 85 rods; but I certainly imagined at the time I measured that I had good grounds, and I can assert to the best of my belief, that there were 90 rods.
208. You will observe that the difference between Mr. Mais' certificate, on the 25th October, and Mr. Bell's certificate, of 4th July, is forty-six rods? Yes, I must admit and cannot explain it,—it is hardly worth while pressing the question further; the error has been committed in a most egregious manner.
209. *By Mr. Scott*: By Mr. Mais? By Mr. Mais.
210. Not by Yourself? No.
211. *By the Chairman*: I wished to know whether you could explain it to the Committee in any way that appeared to you satisfactory? I cannot. I have spoken to Mr. Mais on the subject, and he said at once that he had made an error, that he might have taken up a wrong point.
212. You cannot give any explanation of an error so very gross, and can offer no excuse? No, except that in a work of this character, containing so large a number of items, it is not impossible to make errors of the kind.
213. I will direct your attention to another error—if you run up the total amount of the certificate of work in Macquarie-street on the 25th October, it is £18,703, while on the 4th July, Mr. Bell states the total amount in that street at £15,061, being a difference of £3,642. This error, I may say, is mainly made up by this gross error to which I called your attention in the driving in rock and in the brickwork; and certain junctions were charged for which are found to have no existence—can you account for so many and so gross errors being made in one street? It is inexplicable to me. With regard to the question of junctions, if I had looked at the item one moment it would naturally have suggested itself as an error; but as I stated before, these certificates were presented to me, as ordinary weekly accounts, as they came in. It was not only in this department, but in every other department connected with the City, such as the wages account, &c., &c., made out by the proper officers and placed before me with their signatures, and as I could not be expected to go into all the details of these accounts; they obtained my signature, as a matter of course.
214. You did not take pains to satisfy yourself as to details—would it not have been a more prudent course to have abstained from signing? Then I should have had to enter into all the details of the accounts myself; it would have been utterly impossible for one man to accomplish it.

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215. Assuming that you had not time to do so, would it not have been the preferable course not to have signed? No; it was my duty to sign as a matter of form; signatures were compelled to be given; it was not optional with myself.
216. It is perhaps hardly worth while, the error is so very great, to press the matter—but I will call your attention to another item—if you turn to the certificate of the 27th September, you will find charged 3,577 lineal feet of driving in rock, amounting to £16,096 10s., and if you turn to Mr Bell's certificate of 4th July last, you will find that this item is reduced to 2,790 feet, amounting to £12,555, being a difference of £3,541 10s.? That quantity was reduced in consequence of the whole being returned by Mr. Mais as driving in rock, and it was reduced, by an arrangement made with the contractor, to a proportion of rock and such portion soil, by agreement with the contractor, in consequence of the dispute on the question of which was considered to be rock or soil.
217. Does that account for the total difference? Yes, I think it would account for the difference.
218. I do not see any material increase for excavations or tunnelling in soil between Mr. Bell's certificate of the 4th July, and Mr. Mais' certificate of the 25th September—Mr. Bell charges for as rock; what had previously been charged for as soil, some 350 feet? Mr. Bell has cut up the items here, so that he does not state the whole quantity of driving, but if you look further you will find other items that will bring up the amount very considerably; in Mr. Bell's certificate you will find that there are various separate items which were originally included in one.
219. Adding those sums, they fall very far short of £16,000, and there would be some additional work performed between September and July? If you look to the certificate of the 27th September, you will find that the 3,577 feet driving in rock does not include any of the items of soil that Mr. Bell has included in his certificate; and I find that the total quantity comes out the same, although a reduction has been made in the material. If it had been 3,577 feet driving in rock, and it afterwards had been decided to be partly rock and partly soil, the quantity would come out the same.
220. Supposing the whole brickwork that he certified for was fifty, or whatever other number of rods than Mr. Bell certifies, it shews, even on that assumption, that he must have committed an error? Yes, but it shews the errors were not all on the same side.
221. You are not prepared to say that the whole of the brickwork was executed at that time? My impression is that the whole of the brickwork in Pitt-street was completed before I ceased to act for the Commissioners.
222. Will you be kind enough to state to the Committee the grounds, generally, on which you decided on tunnelling to so large an extent? The reasons for that, to a man practically acquainted with the work, are very obvious; but I will state them as generally as possible. In the first place, the Act specially provides, by clause VII, "That the Commissioners are empowered to construct sewers and drains as they, the Commissioners, shall think proper, with certain restrictions, the chief of which is, that they shall perform the work with as little damage as may be in the execution of the several powers granted to them." That is one reason that the inhabitants, who, I presume, have really to pay for this sewerage, should not be interrupted in their business in the narrow thoroughfares. Again, the water mains are entirely laid down in the centre of the streets, and open cutting would have interfered with them to a very great extent, as has been proved in the very short distances they are open cutting now in that portion of Castlereagh-street, where a small three-inch main is laid down in the centre of the street; it has been properly slung, and few accidents have occurred while it has been slung, but immediately after the filling in the earth, the pipes have gone from the natural re-consolidation of the earth, which is not effected by ramming; in less than five hundred feet in Castlereagh-street the pipe has broken at least half a dozen times, and the inhabitants have been cut off from the water, for which no doubt they will demand compensation from the Commissioners. In Pitt-street there was a large open cutting, and a nine-inch main, and though it was slung as fair as art could suggest, it went, and robbed the north end of the City of water until it was repaired. These are accidents that would continually occur if open cutting were prosecuted, as the re-consolidation of the earth would be going on for a length of time, and it would not be possible to support the pipes, except by expensive means, so securely that would prevent them continually breaking. That is another reason. But the principal reason is this,—I have been much guided by local circumstances. Pitt-street is the lowest level of all the streets in section number one, and all the streets through which sewers now run are parallel to it; there are a vast number of imperfect, ill-built drains, running transversely across the streets at extremely frequent distances to Pitt-street, or rather the Tank Stream, and if open cutting were adopted, these drains must be discharged into the sewers as they were being constructed, and render it almost impossible for the work to be carried on in a satisfactory manner—indeed the work could not be completed. That was one of the principal reasons why it was preferable to tunnel underneath the site of these drains. In works of this kind, you must give the Contractor a clear course, but, independently, you can imagine the injury it would be to the work by these numberless drains, from one end of the street to the other, being discharged into a sewer during construction.
223. These are the principal grounds on which you recommended so large a proportion of tunnelling? Yes.
224. Could not effectual means have been taken to prevent the bursting of the pipes to which you have alluded, without any great cost? I do not know any effectual means; they were all old, extremely brittle, and nearly all corroded, and required support their whole length.
225. Could not these drains to which you allude have been stopped? At vast expense; means might have been devised to divert, but not to stop them, but it would have been more expensive.
- 226.

226. Than the tunnelling? Yes; and again, the streets, from the depth to which we have gone, would not have held the material thrown up; it must have been carted away, or blocked the streets, to the detriment of the inhabitants. These are the practical reasons why so much tunnelling has been had recourse to in carrying out the works.

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227. It has been stated to the Committee, by professional men who have examined the work, that open cutting was preferable, with a view to secure good work in the sewers—that it enables you to secure thorough and good work? It naturally suggests itself that the facilities for constructing brickwork in open cutting must be greater than in tunnelling, but, on the other hand, it does not necessarily follow that the brickwork is to be done in such a way in a tunnel that it is not as good and perfect for the sewer as work that may be, and can be, constructed in open cutting.

228. It has also been represented to the Committee that the cost of open cutting would have been very considerably less in these sewerage works, which have been carried on under your charge, than the cost of tunnelling has been? On that point I believe it has been so represented, but I should be sorry to place much reliance on a man who could give such an unscrupulous opinion. Having been estranged from the works some time now, matters hardly present themselves to my memory. But there is another cogent reason why tunnelling is better than open cutting, the formation of streets and roads,—by open cutting you must destroy the principal and best part of the street, the crown or centre, and it will take years for the re-consolidation of a depth averaging from twelve to fifteen feet throughout these streets. The continual repairs will perpetuate an annual expense. Money might have been saved on one hand, but, looking to the ultimate expense, I am satisfied tunnelling will prove the most economical in the end. You cannot tell the amount that would be required annually to reform these streets, and bring the sides to the proper section. It is nearly eighteen months since the sewer in Elizabeth-street was made by open cutting, and that is not yet re-consolidated. A portion of Parramatta and George Streets alone cost £40,000 to reform and metal.

229. *By Mr. Lang:* As the ground sinks they will have to refill it with metal? Not only so, but the ground sinking into its natural state, as it falls you must remove the blue metal and put on the crown, course after course, until nature has effected what art cannot. Therefore I say, from this and other reasons, that an opinion urged by any professional man that tunnelling is more expensive and objectionable than open cutting is unscrupulous.

230. *By the Chairman:* You dissent from the opinion expressed by professional men that open cutting to the depth of fifteen or eighteen feet is decidedly cheaper than tunnelling? Yes. What I mean to state is this, I say *emphatically* that the operation of tunnelling for these sewers will ultimately be cheaper than open cutting.

231. How did you determine the charges for the ground through which the works were carried? It was almost self-evident in itself. The practical definition might have been arrived at with much less difficulty than it was. There was a great outcry at the time. There was a discretionary power left with Mr. Mais, and he perhaps went beyond it in charging the whole as rock, when he ought to have charged a portion soil. This was the revision eventually made.

232. Was there an examination made in January last by yourself and Mr. Plews, with a view to determine the accurate charges for ground through which the sewers were carried? I think Mr. Plews' was more a geological than a practical definition, but I would rather refer you to the evidence given by Messrs. Hume, Blackett, Lennox, and Houson, particularly to the statement of Mr. Lennox, who says, "if there was a greater portion of ironstone in it it would be rock." At all events there was a diversity of opinions upon the subject, and I thought the matter had better be arranged by a reduction in the charge, calling so much rock and so much soil.

233. And that reduction was allowed, in pursuance of the measurement made by you in January last in conjunction with Mr. Plews? No; that was not an admeasurement, it was an inquiry.

234. To determine the charges which could properly be made for the ground of a mixed character through which the sewers passed? The Commissioners chose to accede to the arrangement from the evidence that was given by these gentlemen, but I certainly should have adhered to my original opinion, and given the contractor the benefit of the doubt, for the practical definition really is, that what cannot fairly be dug by a spade is rock.

235. I understand you then to say that you adhered to the opinion embodied in your certificate, rather than adopted that expressed by Mr. Plews? I do not know that I ever read Mr. Plews' Report. I cannot call to memory that I ever read it; he was engaged by the Commissioners.

236. What was the result of his inquiry, with reference to the charges of Mr. Randle? I do not think Mr. Plews was called upon to give an opinion as to what Mr. Randle should charge; but, I think, his opinion was required rather in a geological sense, than a practical opinion upon the strata through which we had passed.

237. Did the Commissioners make any difference in the amounts that were payable to Mr. Randle? I believe they did. They went into the matter with him, and, I believe, arranged that some portions of the street that had been charged rock should be charged a certain proportion of rock and soil.

238. Which led to a reduction in the amount payable to Mr. Randle on account of this street? I believe so; these amounts I am not cognizant of; in fact I was not a party to the arrangement.

239. You were disposed to dissent from it? Yes; knowing the practical difficulty of working this stuff, and the extreme density of the rock that Mr. Randle had met with in a great portion of the rock through the Domain. I thought, when he came to a small portion of softer material, that it would not be equitable, because he was getting a little advantage after

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- after having had a great disadvantage, to charge it as soil, except where they had no difficulty in discriminating, as in Elizabeth-street, where it was charged half rock and half soil.
240. Under the plan by which you originally contemplated carrying out the sewerage, I believe you intended to have constructed a main sewer down George-street? I never arrived at any intention of the sort. I possibly may have stated that George-street might possibly contain a sewer, but not a main sewer.
241. According to the plan you originally contemplated, a sewer might have been made down George-street? It is possible.
242. To drain that portion of the eastern water-shed that is to the westward of George-street? That would be the purpose of a sewer in George-street. The eastern side I intended to bring into Pitt-street, but I arrived at no definite conclusion with respect to the west side of George-street.
243. You had not finally determined? I had hardly given the matter consideration, because my whole time was occupied in the general arrangement of the section in the course of construction, and the details connected with it. The object of a sewer in George-street was to intercept the flow from the upper portion of the western side of the water-shed, to prevent too great a flow into Pitt-street sewer, which is the lowest level, and in which locality, in order to obtain the necessary inclination, I was limited to size.
244. In the course of your evidence given before the late Committee, you stated, I think, that you contemplated making a sewer in George-street, to drain that portion of the City lying to the westward of George-street; are you aware that the intention of making a sewer in George-street has been abandoned? I am not.
245. You are not in a position, I presume, to express to the Committee an opinion as to whether the sewer in Pitt-street is sufficient to carry off the whole of the water from the western side of George-street, as well as from the portion now drained? I should be afraid to trust to it.
246. You do not feel in a position to give an opinion upon it? No. My impression is, that I should adhere to my original intention, and intercept a large portion of it. The local circumstances are precisely the same on this side as on that; and as I believe the steps adopted on this side are perfect, I do not know that I should alter my arrangement on the other.
247. Had you occasion to call upon the contractor to make good any defect in the sewers while they were under your charge, either as to the quality of the material or the soundness of the workmanship? In some instances there were reports made to me by Mr. Mais, of that character, and of course orders were given by me that they should be corrected.
248. There were no material corrections? No. There were some bad materials put in, in the first instance; and it is not to be wondered at, that in this Colony, where works of this kind were new, some discrepancies should occur; but they were rectified as soon as possible. There were some bricks of bad quality, or rather some soft bricks put in the work, but I hold it a matter of opinion, whether soft bricks are not quite as good as the hardest, that is, bricks in which there is ironstone, for works of this description.
249. Had you to call upon Mr. Randle to rectify any error in any part of the sewer where he had tunnelled? Yes, in two or three parts; that was the fault of a man named Edwards, his superintendent, who pretended to be something of an Engineer, and it turned out that he hardly understood the use of a level; at least he did not understand his business.
250. There were some errors committed in consequence? Yes.
251. Where was the most material error? I believe near the Water Police Office.
252. What steps did you cause to be taken to rectify the error that had been committed? I caused it to be driven in the right direction; I went down myself and made a personal inspection of that work, and found it wrong.
253. Did you call upon Mr. Randle to make the line as originally drawn in your section? The work was set about immediately, at least as soon as the weather permitted.
254. You did not sanction his making any deviation? None at all.
255. So as to interfere with the line of the sewer? Not in the slightest; there was no deviation of any extent from the original intention; there might have been an inch or two.
256. Will you be kind enough to inform the Committee what steps you took before entering upon the execution of the water works in reference to the surveys and examination of the ground, and, also, as to drawings, plans, and sections? Being a comparative stranger here, I naturally looked to the source from whence the water was to be derived, and having satisfied myself that the representations with regard to Botany were correct, and that source was capable of supplying the city to a much larger extent than at present existed—indeed, that it was capable of supplying the city for some centuries—I fixed upon Botany as the place from whence to obtain a supply.
257. *By Mr. Scott:* You say for some centuries? Yes; or, at least, for some considerable period.
258. *By the Chairman:* You satisfied yourself that there would be a sufficient supply? Yes, for a population of 200,000, from the present arrangement of the ground, without increasing it; but I thought the first step to be taken was to secure such an extent of ground, as large as I thought necessary, to make reserve for a continuous supply in case of drought. I made arrangements for a reservoir, of a most capacious character, to provide against contingencies; I produced plans, drawings, sections and everything that was requisite for the permanent supply, and the Commissioners submitted them to His Excellency and other parties, and I believe they were generally approved of; the details were not all decided on, consequently there had been no work commenced, excepting the boring of the ground, to ascertain the best locality for the foundation of the necessary mechanical works for the transmission of water to Sydney; the engines and mains were contracted for, and sent for to England, and both of which have arrived.



259. In the report furnished by Mr. Bell to the Commissioners, dated the 28th March, he points out that there are some omissions in the instructions given for the engines—have you read Mr. Bell's report? No; I believe Mr. Bell's arrangement does not agree with mine in detail. W. B. Rider,  
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260. Mr. Bell points out in this report that in the instruction given there were errors as to the power of the engines; he states that the diameter of the cylinder was out of proportion to the engine—that the size of the pump was in excess of the size of the engines? I heard that there was a difference between the two; but these are matters of calculation that I cannot admit or deny without going into calculations, and I have had neither time nor inclination to go into them. I must explain that the character of the engines only was decided upon by myself, and as in most cases of this sort, as hydraulic engineering is a business of itself, I left it to the responsibility of the party supplying the engines, and merely stated what they were called upon to perform; I gave the general character of the engines, which is the usual course adopted.
261. Mr. Bell has said that the duty the engines were required to perform was not stated, and that the diameter of the pump was not stated in the specification or plans? My impression is that the diameter of the pumps was given; if it were not, it could have been taken from the drawings, which were drawn to a scale. Hydraulic engineers, whose business it is to produce engines of this description, would understand what was required, and it was immaterial to them whether the diameter was given or not.
262. Was it not essential for him to know what the engines were required to perform? He was distinctly informed what they would have to perform, and the height of the column.
263. Do you feel satisfied that the stand-pipe you had decided upon creating was not unnecessarily expensive, for I observe that Mr. Bell appears to consider that it was "wrong in principle and expensive in practice?" Of course that is a matter of opinion between professional men; but Mr. Bell may have yet to learn, when he trusts entirely for the supply of this City to mechanical agency alone, that it is better not to trust to one agent, but to have a reservation, where the expense is not much increased. I believe it is Mr. Bell's intention to have only one stand-pipe, and if that falls out of order, the supply must entirely be cut off, or he must have a very extensive reservoir in the City. My arrangement was to have a tripod of stand-pipes—I will not say it was my own arrangement, for it was originally carried out in America—so that a reserve of stand-pipes might be had. So it was with the engines, each could work alternately, and in case of accident there would be a reserve. I repeat, that as the City is to be supplied by mechanical agency, the less liability to accident the better, and in the end the cheapest.
264. One objection, as I understood, urged by Mr. Bell to your plan was, that under your plan you proposed to raise all the water to the height required to supply the highest portion of the City, thereby incurring a waste of power? That is a question of detail. Mr. Bell may prefer having two services; I think the better plan is to have one; because, as four-fifths of the City being considerably elevated, it is perpetuating a double expense to that which would be incurred in lifting the whole to the higher level.
265. Mr. Bell states that it would be less costly to make and less costly to work? Well, I went into both questions, and decided as I have done.
266. He says that it would be necessary to raise only thirteen-fifteenths to 120 feet, and two-fifteenths to 210 feet? He has, for some reason that I do not know, an excess of altitude that I have not.
267. *By Mr. Oxley:* It is to overcome the friction of the bend of the pipes, which you do not allow for? I have allowed for any friction that might have arisen.
268. *By the Chairman:* On what road did you propose to lay the service pipe? Along the public highway.
269. Would not that have involved an extra length of main, and also some considerable windings? No windings beyond what may be considered ordinary; no curves of any particular radius beyond what are practicable.
270. What advantages did you assume or conclude you would gain by laying pipes along Botany Road, instead of taking the shortest and straightest course from the reservoir to Sydney? I did take the shortest course. Mr. Bell must be labouring under a mistake, for I had ordered a sufficient number of mains to bring water to the City, while Mr. Bell has ordered some thousand pipes more in consequence of the route he now intends.
271. Where was your terminus to be? At the Chippendale Toll-bar.
272. Could you not find a straighter line than you would have by following the Botany Road? Possibly a straighter, but I do not think a more advantageous one.
273. What advantages did you assume you would gain by taking the high road? The high roads, in all matters of sewerage and water supply, are pre-eminently adapted for fixed works of these kinds. In the first place it is always easy to get at the mains, and they do not interfere with private property. Another point with regard to bringing the mains along the Botany Road is, that the ground is consolidated, and almost level from one end to the other. I think putting these heavy pipes through a sandy soil is a dangerous experiment; it would be difficult, if not impossible, to support them through a loose soil of that description, and if they once go, there is an end to the supply. I think, therefore, for these reasons, and on account of the facility of getting at the pipes, that the road is the preferable route.

WEDNESDAY, 17 DECEMBER, 1856.

## Present:—

MR. JONES,	MR. PLUNKETT,
MR. LANG,	MR. SCOTT,
MR. OXLEY,	MR. WILSHIRE.

RICHARD JONES, ESQ., IN THE CHAIR.

W. B. Rider,  
Esq.

William Boughton Rider, Esq., C. E., called in, and further examined:—

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1. *By Mr. Scott:* Have you seen persons taking the admeasurement of the tunnel with the tape? Agents of the Commissioners, I presume.
2. On the part of the Commissioners? I have, frequently.
3. Will you state whether the two parties that held each end of the tape belonged to the City Commissioners' Department? On some occasions it might be that both parties who held the tape were connected with the City Commissioners' Department, and in some cases it might be that a workman might be taken from the work to assist.
4. When you say a workman, do you mean one of Mr. Randle's men? Yes, one of the laborers.
5. Supposing that one of Mr. Randle's men held the tape at one end, and some person connected with the Commissioners held the other, would you consider that a correct way of measuring? It has always been deemed a correct way, and is generally the practice.
6. Where? On every work I have been acquainted with for a period of twenty-two years.
7. If such were the case, would it not give opportunity for the parties—supposing either party was dishonest enough to do such a thing—to make a false measurement, by shortening or lengthening the tape, according to circumstances? Where the parties were dishonest, or had an intention to commit a fraud, they could do it by trickery of that description; but I believe in every case a man was taken from the work indiscriminately—not any particular man interested in payments; therefore, I presume there was little probability of fraud being committed.
8. Who directed that certain portions of the work should be tunnelled, and certain portions should be open cut? Myself.
9. Invariably? Invariably.
10. Mr. Randle never did any tunnelling without first consulting you? Mr. Randle never did any tunnelling without first consulting myself; or, rather, my consultations were not with Mr. Randle, but my directions were given to the resident Engineer, and they were then given to Mr. Randle's employées.
11. If persons connected with the City Commissioners entirely took the measurements, as you say frequently happened, how did Mr. Randle know whether his work was correctly measured or not? That I do not know. Mr. Randle measured the work for his own payments.
12. I believe he never sent in these fortnightly accounts at all? As I said they were rendered in the shape of accounts of work performed, but not moneyed accounts.
13. Fortnightly or quarterly? I allude to the fortnightly accounts, but they were never sent in, nor were they deemed necessary. If there were any discrepancy in the accounts to be paid as advances, very likely the quantity might be looked at by Mr. Mais, to see whether there was any disagreement in any part of the work.
14. Is it your opinion that Mr. Randle was acquainted with all the admeasurements of the work, and the kind and quality of the work throughout the whole proceedings? I should hardly think he was; his numerous other engagements would, perhaps, prevent him having a knowledge of the details.
15. We are not talking of trifles, but accounts involving large amounts of money; did he trust to yourself or any other party—was Mr. Randle acquainted with his own work or not? I should think he must have been, to a great extent.
16. Have you seen him examining the work himself at all? I have.
17. In Macquarie-street? Yes, I have seen him.
18. The brickwork? Some portions of it.
19. Do you think he was aware of the quality of the bricks, the kind of work executed, and the quantity of work in Macquarie-street—was he acquainted with those particulars to your knowledge? It is impossible for me to answer that question; I cannot say whether he had any knowledge of the details of the work.
20. Mr. Storey and Mr. Parker, are they not parties belonging to Mr. Randle? They are.
21. Were they aware of the quality and quantity of the work—his foremen I mean? I think Parker came subsequently to the greater portion of the work in Macquarie-street having been completed. Edwards was his *factotum* for a great portion of the work.
22. I will not allude to the error in length in Macquarie-street, for that has been already alluded to by the Chairman, but I will allude to the brickwork. Yourself and your assistant certified not once, but from time to time, that there were 131 rods of fourteen inch brickwork—that is the whole length of Macquarie-street? Only a portion, I think, you will find.
23. *By Mr. Lang:* Except 27 feet? Except 27 feet.
24. *By Mr. Scott:* Look at the top of page 141 of the Report of last year—it begins with Macquarie-street. That may account for the error in the quantity of brickwork, if it is all charged as fourteen inch work? Yes, that is the error that has been committed by Mr. Mais in the quantity.
25. I have not alluded to Mr. Mais. I believe you stated that, on the 27th October, you had completed all your measurements—correct measurements? I completed the admeasurements.
26. Have you those with you? Only memoranda.

27. Have you any objection to shew the memoranda of the measurement of Macquarie-street, on the 27th October? (*The witness produced a paper.*) I do not know whether I have it; the measurements are not reduced here. W. B. Rider,  
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28. What do you say as regards Macquarie-street—what length do you make it? Between the 23rd and the 27th October, 2,142 feet was the length of driving in rock, without reference to the reduced quantity of open cutting.
29. What did you make the brickwork? Ninety rods at that time.
30. Of what thickness? A portion of it was fourteen inches—so many feet; I think I have not the number here.
31. What portion should you guess? I do not recollect, at least I do not see a memorandum of that item.
32. *By Mr. Plunkett:* What paper is that you are looking at? My own memoranda, made at the time of my measurements—the admeasurements I alluded to when I engaged fresh assistants to make a measurement to check that of Mr. Mais on the 27th October. I cannot speak with certainty of dates from the length of time that has elapsed.
33. *By Mr. Scott:* Could you give an approximation? I know the points on the ground; it would be northward from the end of the guard-house wall. I gave directions that that should be fourteen inch work, but that southward it should be nine inch.
34. Could you state at all, in general terms, how much fourteen inch and how much nine inch work was executed? I could hardly tell you without having reference to the length; I have not, I think, the lengths of those portions of the brickwork.
35. I thought you stated that you took accurate admeasurements, to check Mr. Mais? Yes; but I can hardly state with certainty the quantities. I believe there were 576 feet; but it is crossed out, and I do not know whether it is to be depended upon—whether, from this memorandum, the length is to be relied upon.
36. The thickness of the brickwork is what I am asking for now—how much fourteen inch and how much nine inch work was there according to your measurement? I have lumped it together; but I could answer the question on reference to documents in the hands of the Commissioners, and, if you will allow me, I will insert it in the evidence. I think I gave directions to have about 696 feet of fourteen inch brickwork.
37. And the remainder nine inch? And the remainder nine inch.
38. Did you, in taking this last admeasurement—? This is not the last.
39. I am only talking of the measurement of the 23rd and 27th October, when you took this measurement, which, I think, you said was an accurate one—? As accurate as could be made under the circumstances.
40. Did you see, in taking that admeasurement, that 696 feet of fourteen inch work was absolutely put up according to your directions? To all appearance it was. Mr. Hooper, Mr. Cowlshaw, and myself, endeavoured to ascertain by examination of the ground—not that we had any reason to suppose that the work was not executed. At the shafts, and the places where it was possible to see it, fourteen inch work existed.
41. Then on the 27th October you completed this admeasurement? Yes.
42. And you then found that Mr. Mais had made some considerable error? Yes, subsequently to having made the calculations.
43. On the 27th you were aware of that? I might not have been aware of the miscalculation in the admeasurements of Mr. Mais for a week after.
44. That would be the 4th November,—could you state to the Committee, that on the 4th November you were acquainted with this considerable error in Mr. Mais' certificate? My attention was first called to it, not to any particular item, but by the moneying out of my own admeasurements in comparison with those of Mr. Mais.
45. You stated that before the 25th October you had not made out the admeasurements, and that you finally completed them on the 27th, two days after,—it took, you say, about a week? With other duties it, perhaps, may have taken a week.
46. At any rate, your suspicions were aroused on the 27th October, that Mr. Mais' measurements on the 25th October, two days previous, were inaccurate? No; for you will find that on the 25th October I made no comparison with Mr. Mais.
47. I say that on the 27th you found inaccuracies in it, after you had signed it? I repeat that I had not, perhaps, arrived at the knowledge of any error at that time. My measurements on the ground were only completed on the 27th, and it might have been a week, or some time after, that I discovered a disagreement between the total amount of Mr. Mais' certificate and my own.
48. At any rate you would make it a point, your suspicions having been aroused—? You must excuse me—
49. I think you said suspicion? I had no suspicion.
50. I thought that was your reason for making the remeasurement? I had no suspicion, not for a moment. The admeasurement was a quarterly one, as also operating as a check.
51. At any rate, as Chief Engineer, before signing any other fortnightly certificate subsequently to the 25th October, you could have made it a point to have ascertained whether any error existed? I did so; perhaps not in the items, but in the total amount.
52. If you turn to the certificate of the 8th November, at pages 142 and 143—that is, four days more than a week after your measurement—you will find that most of the errors still continue. For instance, look at Macquarie-street, and you will find 464 junctions charged, to which you, I believe, certified? Yes.
53. You likewise find 2,727 feet lineal driving in rock? Yes.
54. Whereas, on the 27th October, by your measurement, it was 2,142 feet? Yes, leaving 585 feet to be driven in the fortnight, which, I believe, was accomplished.
55. Then you certified for work done which was not done? No.
56. Leaving that additional? Yes.
57. On the 8th November there are 100 rods 79 feet of brickwork in cement charged? Yes.
- 58.

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58. And here it is called fourteen inch brickwork? I must tell you that I do not compare these measurements, in any way, with those contained in my certificates, but compared only the total amounts of the two.
59. You directed it to be done, and having been examined, to the best of your belief it was executed? Yes, I believe it was. It was the duty of the resident Engineer to see that it was executed, my orders being such.
60. I am not talking of Mr. Mais; I am asking, it being your duty to measure the work, did you do it or not—did you see it executed or not? I did not see it executed, but to all possible observation it was there; but it was impossible to get at the whole of the work, because it was covered up, and had been for months, and without I had taken up the whole of the work, it would have been impossible for me to say, at that time, what amount of brickwork had been executed.
61. How did Mr. Bell measure it—there were several junction collars. I may as well mention, that Mr. Bell in his admeasurement states, that with the exception of the shafts, which were fourteen inch work, the whole of Macquarie-street was nine inch work, except twenty-seven feet? Perhaps you will allow me to say, that Mr. Bell's admeasurement was made with the purpose and intention of detecting supposed frauds; mine was made on the supposition that the persons I had about me were perfectly straight-forward in their proceedings. When I saw that the work at the shafts was fourteen inches, I presumed no fraud had been committed, nor did I examine it with any idea that any portion of the work had been omitted.
62. As Chief Engineer, you considered it quite sufficient to trust to the report of others? I considered it quite sufficient; I had nothing to do but to be guided by the reports of the resident Engineer.
63. And sign any certificate? If he certifies to me as correct. It is the practice all over the world. It would naturally suggest itself to any one acquainted with work, that if the Chief Engineer had to see all details carried out, he would have to perform the duty of the whole staff. You allude to the hundred rods of brickwork in cement, in the certificate of November the 8th—that may be the probable increase in a fortnight.
64. I am alluding to the whole of Macquarie-street being nine-inch work? I was not aware, till I left the Commissioners that there had been discrepancies in Macquarie-street, though I did not then make a personal examination to ascertain the truth of the assertion, but received the statement from others.
65. I distinctly understood that you signed on the 8th November, because Mr. Mais produced the certificate before you, and you then signed it as a matter of course, believing him to be upright and honest? I signed it as a matter of course. Mr. Mais having reduced the amount contained in his certificate so as to coincide with that of my own, and you will observe that the two reductions, with respect to the driving and brickwork, were made on the 8th November, which, no doubt, Mr. Mais had discovered on reference to the measurement of the 23rd and 27th October. I might not have gone through the whole of the items.
66. Who is Mr. Storey? He is acting as manager for Mr. Randle, I believe.
67. Was he with Mr. Randle when Macquarie-street was in progress? I can hardly charge my memory. I do not know the date from which he was connected with it.
68. You thought then that tunnelling was necessary in various streets? I think, in my evidence last week, I gave ample reason for that.
69. Particularly in Macquarie Place, where the arch of the tunnel comes out at the top of the street within a few inches? It was, perhaps, more particularly required there than other places, in consequence of the nearness to houses, and the uncertain nature of their construction.
70. And you considered that tunnelling was preferable to open cutting? I did, and do so consider it.
71. Because open cutting would obstruct the commerce of the streets, and likewise, by blasting and other things, injure the houses and passengers? Those were reasons of the same importance, but they had both a bearing on my ultimate determination. I have described the local causes why the sewers could not be constructed with all the transverse drains running into them, and further the great expense that would be attendant upon removing the crown of the street and re-forming it.
72. Do you consider tunnelling or open cutting the general rule? It entirely depends upon the influence of local circumstances, and the depth to which you may go.
73. We have been told here, that at Woolwich, which is a very busy town—? I am intimately acquainted with it.
74. We are told that in the streets of that town, which are twenty feet wide, and the cuttings fifteen feet deep, open cutting was preferred to tunnelling as the rule, and that tunnelling was the decided exception? Very few streets in Woolwich are so narrow as 20 feet. There are, no doubt, single instances, and many where open cutting is adopted; but I can tell you, from the experience I have had (and I have been intimately acquainted with sewerage works for many years), that it entirely depends on local circumstances; and where you go to particular depths, such as we had to go to here—twenty and thirty feet—tunnelling is far more preferable. I will state that in opposition to any professional opinion that may have been given to the contrary.
75. Not only one party, but several parties have agreed that open cutting would be preferable to tunnelling? Parties that may consider themselves competent to give an opinion may say so, but I will stake my opinion in the face of the world.
76. You still think that the excavation in Pitt-street, Castlereagh-street, and Elizabeth-street, extending from Market-street to Bathurst-street, ought to have been by tunnelling? Portions of those streets have been executed since my time.
77. I will refer you to the evidence of Mr. James Houson? I have every respect for the gentlemen who examined the sewers; no doubt they are good practical men in their line of business;

business; but it is an opinion I do not much regard, in consequence of their being (without W. B. Rider, any disrespect to them) merely builders. I had the practice and experience of the profession of an Engineer to guide me in my duties and responsibilities, and I do object to the evidence of gentlemen of their limited knowledge of engineering works being relied upon, or of giving evidence upon professional matters at all. Esq. 17 Dec., 1856.

78. I was referring to the question of rock and soil. They are capable of giving an opinion on that point, as builders; and Mr. Houston says—in talking of material that had been paid for as rock and soil—in answer to a question, whether “this particular material was peculiarly adapted for open cutting,” “Yes, you might cut it to almost any mould; it might be ragged at the edges, as the ironstone would break out of the section;” and they all agree that it was very easily cut? Excuse me, but I think his evidence is self-contradictory; he says it might be cut to any mould, and yet that it might be ragged at the edges.

79. He means that it would keep up to its position, although the edges might be ragged? If the super-soil were of a loose character it might not stand, but would have to be cut at a slope, and impede the progress of the work underneath, and most of the upper surfaces of the streets are irregular.

80. You say you discovered a misdirection of the tunnel in Macquarie Place, during your holding office? Yes, about a month or so previous to leaving office.

81. Did you give the contractor any permission to join it with a curve? No, none at all; directions were immediately given to alter it to its proper direction, and I bored a hole myself for the purpose of ascertaining which was the right direction; I personally directed the boring of the hole, to know how much the driving had deviated from its right course.

82. Have you any of the plans and letter of instructions you alluded to, with reference to the engines you sent for? I have none; I have not kept tracings.

83. I understood you to say you left it to the engineers at home, these pump and engine makers, to make it according to their own ideas, with reference to lifting up a certain amount of water? You misunderstood me; I gave the general character of the engines, and the work those engines would have to perform, and left it to the responsibility of the mechanical engineer at home to carry out the detail of the engines, with the latest improvements.

84. Did you not give the absolute diameter of the cylinder? I believe the diameter of the cylinder was mentioned; they were seventy-five horse power.

85. I think you gave the stroke and everything else? I sent a general specification.

86. Would that leave them any option of making it otherwise than to your order? It would leave them every option necessary for supplying the engines in detail, with the latest improvements in pumping or performing the work.

87. It has been stated to us that these engines that you reckoned seventy-five horse-power each, could not by any possibility be worked up to fifty-six? I had rather not answer any questions of that sort without knowing the details of the evidence.

88. Did you make any survey of the line you intended to lay the pipes on? Along the Botany Road.

89. Did you take long sights or short sights? The lines were accurately levelled; whether they were long or short depended on the nature of the surface of the ground.

90. Did you take any sections, shewing the depth of soil to be cut through? I had not at that time fixed the depth. The line of pipes I intended to carry as near the surface as the safety of the pipes would allow.

91. Taking the inclinations of the various hills? Taking the inclinations of the various hills, of course.

92. You did not intend to lay the pipes tolerably straight, but would have followed the rise and fall of the undulations? I repeat I had not arranged the levels at which I should lay the pipes, but I selected the road for the reasons I stated the other day.

93. You did not consider it necessary to take an accurate survey before laying the pipes along the road—I am aware you took a general long sight without taking sections? Will you allow me to explain? There is a difference between a plan and a section: a plan is the horizontal description of the country; a section is a different thing—it describes the vertical elevation of the ground in reference to a datum line. I say I had not decided at what depth I should lay the pipes along the ground; that must be influenced greatly by the upper surface of the ground.

94. You allow you took a plan, but you took no section? Excuse me. I say I took sections, but no plan.

95. Have you these sections? I believe they are in the office. May I explain? A plan of the road would describe the width of the road, the adjacent property, and also shew the horizontal curves; a section would be constructed on a datum line, shewing the vertical depths taken at different points.

96. Did you take that? Yes; that was the principal information I did obtain.

97. Have you the sections? They are in the office.

98. Can you produce them? I presume the Commissioners have them. Mr. Hooper was some weeks making the sections.

99. Did you make any other plan or survey, or did you adopt that at once? I adopted the route of the road, for the reasons I stated the other day. It was my opinion that it was the best.

100. I did not understand clearly whether you would have followed the undulations of the surface of the ground with the pipes, or whether they would have been laid on a certain level? They must, in fact, be adjusted to the undulations of the surface; but they would be laid at such inclinations as would avoid any amount of friction in the pipes, or any undue obstructions to the water flowing freely through them.

101. Do you remember the greatest amount of cutting from Botany to Sydney? I repeat, I had not adjusted the levels at which I intended to lay the pipes, and therefore I could not

W. B. Rider, Esq. tell you the amount of cutting. It might have been necessary to have raised the road in some places.

102. *By Mr. Plunkett:* How long have you been in the profession? I think this year will number twenty-three years.

103. Where did you serve your time? With Mr. Nimmo, and afterwards I was with Mr. Brunel.

104. How long were you with each? About three years under articles, as it is termed.

105. After your articles had expired, did you take any degree or get any diploma? No.

106. What testimonials did you lay before the Commissioners when you applied for the office? I had seven or eight, though they were not testimonials in reference to the office I then sought; they were testimonials I had accidentally procured in England to Mr. Flower, as a candidate for the Engineership to the Sydney Railway. These testimonials were seen and known of in London by a gentleman whom I have the pleasure of knowing here, and he interested himself at the time he was in England to obtain the appointment of Engineer to this railway for me. These testimonials I carried with me here. They are testimonials, I must tell you from men of the highest standing—men who have been connected with public works in England, I may say, for half a century, with whom I had considerable intercourse—Mr. Rastrick among the number.

107. Who is the gentleman you allude to here? Mr. William Fanning.

108. Have you those testimonials still? I have. Mr. Elliott has frequently asked for them, and they have, at all times, been produced.

109. Have you any objection to let the Committee see them? I have no objection to furnish them to the Committee. Would it not be preferable that you should ask the Commissioners.

110. How long were you in the Colony before you were appointed City Engineer? I think about nine months.

111. Had you any employment at the time? No; I invested money upon some patent machinery in the shape of a large brick establishment.

112. Was it to Mr. Nimmo you were articleed? I left him at the period of his death.

113. How long had you served at that time? I think two years.

114. Then you went to Mr. Brunel? I think I had intermediate employment in Ireland on the railway commission.

115. What was the nature of your connexion with Mr. Brunel? I was engaged on the Great Western Line for some years with him, and upon some of his heaviest works. In fact, I have only been connected with members of the profession, of the highest rank,—Sir John McNeill, Mr. Vignolles, Mr. Rastrick, Mr. Bramah, Sir William Cubitt, and one or two others.

116. Will you state what was your experience in the profession after you served your articles, until you came out here? I have been engaged as Resident Engineer on several of the most extensive railways in England—the London and Brighton, for instance, under Mr. Rastrick, for some years. I was appointed Resident Engineer of a great length of line, for the purpose of seeing these works carried out in their integrity, as he or as I might have designed them.

117. What are the duties of a Resident Engineer? To see the details of the work carried out as they emanate from the Engineer's Office, to make all admeasurements and returns, so that upon those measurements payments to the contractor may be made. The case was precisely parallel with the situation occupied by Mr. Mais.

118. When did Mr. Mais come to the Colony? I do not know.

119. Were you acquainted with him before he came? Not at all. He is acquainted with parties in England that I may have known; in fact, I believe he was sometime himself in Mr. Brunel's service; but these are matters I have no knowledge of.

120. Had you anything to do with Mr. Mais' appointment under the Commissioners? None at all, except that I believe I sent in his testimonials and application to the Commissioners, with a letter recommending them to appoint him, from all I knew of him.

121. Was that done on your recommendation? Not solely, but I believe the Commissioners had a knowledge of him themselves; Mr. Rae knew him. I believe he was Engineer to this Railway.

122. How far did you recommend Mr. Mais? I can hardly recollect.

123. If you had had no previous knowledge of him, how could you recommend him? Simply from recommendations I had received with him. I might have couched the terms of my recommendation to the Commissioners.

124. What recommendation do you allude to? Testimonials from Mr. Russell and parties with whom he might be acquainted.

125. Parties in England? No; Mr. Russell here, and other parties. I forget what testimonials he did produce, but I recollect the circumstance of Mr. Russell bringing Mr. Mais up to me and introducing him to me.

126. What Mr. Russell? Mr. P. N. Russell, the iron-founder. That led to my making further inquiries and presenting him to the Commissioners.

127. Then it was on your recommendation and sanction that he was appointed? All candidates for office at that time applied themselves, and if we wanted assistance, and if they were thought eligible parties, their applications were to be forwarded to the Commissioners.

128. In commencing this work of the sewerage did you give any written instructions to Mr. Mais? No; the instructions given were not written but verbal ones; all the information he would require to carry these works out was derivable entirely from the sections, except where circumstances of a local character might cause me to deviate from my original intention.

129. What were the verbal instructions you gave him? That entirely depended upon circumstances; for instance, alluding to the work in Macquarie-street, my instructions were for a certain distance, as long as the same nature of ground continued, that fourteen inch work should be put in.

130. Did you give any description of the particular nature of the ground that would require fourteen inch work, and of that which would require nine inch work? If the description of ground altered from that which I gave instructions to put fourteen inch work in, it was his duty to let me know when it altered.
131. Did he do that? I believe he did.
132. In what way? By personal examination; the excavation was completed first, and then I gave directions as to the nature and extent of brickwork to be put in.
133. How would you fix the point if you had no drawing? I had a drawing; at least I had a section on which all points were defined; but on this section the nature of the ground was not described.
134. How did you mention the point to which fourteen inch work was to be completed, and where the work was to be nine inch? By reference to the plan which shewed the intersection of a street or other object close by, and the length defined on the section.
135. Is that marked? Yes; on the sections.
136. Are they forthcoming? They were produced by me last year.
137. Had you any check at all over the reports of Mr. Mais with respect to this work? I had none, except that measurement which I made, partly by the desire of the Commissioners and partly by my own wish, to check the amounts that were then being paid to Mr. Randle.
138. That was in November? In October.
139. When did the work commence? I can hardly bear in mind now.
140. Up to that time what check had you upon Mr. Mais? No check at all.
141. How did you think yourself justified in signing these certificates every week, having no check over him, or but that of satisfying yourself by measurement that he was correct? I wish you particularly to understand that I had no certain check, such a check as I could be responsible for and solely responsible. If I had had any idea of fraud, or of an intention to return work that was not executed, I should then perhaps have taken other steps, and have gone into the matter, as Mr. Bell has gone into it. But I may say this, that during the whole two or three and twenty years that I have been engaged on different works, my employers or engineers have never questioned any measurement I have made, and depended solely on my returns, and in acting as I have done, I have assimilated the professional practice here with the practice at home. I did not deem it necessary to have a check upon Mr. Mais, but, in accordance with the wishes of the Commissioners, I did make a measurement, which, in the ordinary course of practice, I was not called upon to do.
142. If that was the practice, what was the use in your signing the receipts at all—why not allow them to go in on the certificate of Mr. Mais? Simply as a matter of course; as emanating from myself as an officer of the Commissioners.
143. How emanating from yourself? Mr. Mais was not the recognized officer of the Commissioners; in a legal point of view he was not the responsible party; I myself was morally responsible for all these admeasurements.
144. You acknowledge having looked upon yourself as the only person legally responsible to the Commissioners, and yet you continued a system of signing certificates to them about which you had no personal knowledge, and no check whatever upon the representations upon which they were founded? I had no check, nor had I at this time thought it necessary to have a check, he being, in reality, in the same position with myself.
145. When did you first discover any error? At the period of the first admeasurement, as I have told you.
146. What steps did you take then? I sent to Botany, and requested Mr. Hooper, who was another Assistant Engineer in the water department, to come and measure the work; he was a stranger to it, and with another party, he assisted in taking the admeasurement.
147. What particular errors did you first discover? I did not go into the detail; I did not know at this time that there were any errors, nor had I the slightest idea that there were any; but in moneying out my admeasurements, and comparing them with those of Mr. Mais, the Resident Engineer, I found a difference in the total amounts.
148. In what particular item—was it in the brickwork? In the total amount of work; I found errors of some extent between Mr. Mais' and mine.
149. What steps did you take to reconcile the measurements? Being satisfied of the correctness of my own measurement, Mr. Cowlshaw and Mr. Hooper being my assistants, I requested Mr. Mais to revise his admeasurement, and find out where the mistakes arose. I stated to the Commissioners at the time that there was a difference between the amount that he monied out and the amounts I had monied out, and requested Mr. Mais to discover where his errors existed.
150. The way you reconciled the two statements was to give him an opportunity to let his measurements square with your calculation, not by inspection of the work? It was his business to point out to me where his errors existed, which he did, and you will find that in the certificate of the 8th November, the errors previously made in Macquarie-street, both in the brick work and in the length were corrected,—that was the result of the admeasurement I made; but I must tell you, in justice to Mr. Mais, that I firmly believe this was no intentional error, for I found there were other items in which Mr. Mais rather prejudiced the contractor rather than favoured him. There is one item alone in which he makes fifty or sixty feet less tunnel in the main sewer than it was.
151. *By Mr. Scott:* Is that in Macquarie-place? In the main sewers. All these certificates were from measurements roughly calculated, and never intended to be correct, but only an approximation. There were many thousands of pounds at the termination of each fortnight which were never taken into account at all. I will mention one instance, the covering in of the Tank Stream, which cost, I think, £1,000 or £1,100, and there were many other items of that sort that could not be calculated in the usual way during the progress of the work.
152. *By Mr. Plunkett:* Did the person acting for Mr. Randle check Mr. Mais in these items that operated against Mr. Randle? It is very likely he did so; he might have done so; I

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am not aware of the fact; but in making up a certificate of this sort, it is hardly to be expected to go through the items minutely. If the certificates approximately represent the amount of work performed, we consider that, for the purpose of interim payments, sufficiently satisfactory. In what I am stating now, I do not exonerate Mr. Mais for the egregious error he appears to have committed in Macquarie-street, with regard to the brick work and driving; but I can easily imagine how an error of this sort can have arisen.

153. Mr. Mais may answer for himself, but I am now wishing to give you an opportunity of exonerating yourself, for as you were the person legally responsible to the Commissioners, it is due to yourself to account satisfactorily for not exercising that control which was placed in your hands to prevent the Commissioners and the public from being imposed upon? I will only repeat that having been connected with my profession twenty-three years now, I did not think it was—shall I say either courteous or discreet—to go out of the beaten track I have trodden for so many years, and which alone is the proper course. I neither suspected that Mr. Mais was guilty of fraud, nor did I suspect that Mr. Randle was guilty of fraud, nor did I suspect that any one else was guilty of fraud; consequently I placed, as my position authorized me to do, implicit confidence and reliance on these parties.

154. In that spirit you signed the certificates and took the responsibility upon yourself? Yes, and in that light, and under the same circumstances, every other engineer similarly positioned signs documents or certificates to his employers.

155. Did you make any personal inspection for your own satisfaction, after the errors were discovered in October? I almost immediately, and previous to the 31st December, entered on another admeasurement, and that admeasurement was up to the 31st December.

156. What was the nature of that admeasurement? It was taken both as a check and for the quarterly account.

157. What do you particularly refer to—did you go through the brickwork in Macquarie-street, for instance? I think Macquarie-street was completed at that time, and I think it was the only instance where the original certificate not having been doubted, was relied upon. I can hardly recollect, but if Mr. Hooper, who assisted me in that, would, if asked the question, recollect; but I think it was taken from the section.

158. How do you account for the brickwork in Macquarie-street being all reported as fourteen-inch work whereas it is all nine-inch work, with the exception of twenty-seven feet of the shafts? May I ask you to refer again to the certificate of the 8th November, where you will find that the previous error has been rectified.

159. What I want to ascertain is, how do you account for the error, and in doing so, I will refer to Mr. Mais' evidence, page 71, question No. 7: "How are you enabled to measure that portion of the sewer that is completed, when you are not able to see the thickness of the brickwork? I can hardly fancy a case in which we could not tell the thickness of the brickwork, for I know from the sections what the work is to be; it is marked upon them." What sections are referred to? The sections I have always mentioned.

160. Was the thickness of the brickwork mentioned in these sections? In all cases. His subsequent answer states that.

161. I will repeat the question I put before—how do you account for such an error as that of returning all the brickwork in Macquarie-street as fourteen inch work, whereas it turns out to be only nine inch work? I really cannot account for it, except that having received instructions to insert fourteen inch work from the commencement, he calculates the whole of it at the same thickness, without recollecting the change from fourteen inches to nine inches.

162. Did you ever ask Mr. Mais for an explanation? I did.

163. What explanation did he give? That it was an error, and that he had mistaken the length.

164. How did he account for the error in the thickness? That I cannot understand.

165. Did he give you any explanation? No, he did not, except that when I pointed out the point of intersection where the nine inch work was to commence, he stated that he had made an error; I had no suspicion that it was intentional. I simply asked him how it occurred, and he admitted he had made an error.

166. If you had made a personal examination of these works in October and November last, would you not easily have discovered the mistakes in the length of the measurement, the quantity of work, and the thickness? In the length of the measurement I did find out a mistake, as I have stated that my lengths are considerably less than those of Mr. Mais. Again, you will find that the brickwork is reduced by upwards of 40 rods, but whether any deception had been practised or not I cannot tell you. When I was called upon to measure the work when it was complete, it presented to the eye, and as far as I could feel, fourteen inch work, and having no suspicion that it was any thing else, of course I made no further examination.

167. You thought when Mr. Mais yielded to your calculation, and acknowledged that the error was his own, that was sufficient? I believe he went on the ground to satisfy himself.

168. You did not think it necessary to go over the ground? I had been previously over it when I made the admeasurement with my assistants. We were all satisfied with the correctness of our return.

169. *By Mr. Lang:* That was between the 23rd and 27th October? Yes; Mr. Mais sent in his certificate on the 25th, in which the errors in their most exaggerated form appear. Some little time elapsed between the calculation of my admeasurement, and the moneying it; I then found Mr. Mais was in error, and his errors are reduced in the next certificate, with the exception of a fortnight's addition to the work.

170. You have mentioned several times that the difference in the length of driving in Macquarie-street, between your measurement and the next measurement of Mr. Mais—upwards of five hundred feet—was to be accounted for by that quantity having been driven during the fortnight that elapsed between the two measurements,—do you know as a fact, or is it merely



merely a supposition, that these five hundred feet were driven in that fortnight? I believe it was; Mr. Mais' certificate represents such to be the case; it seems an excess of work, but at that time they were working night and day, and five hundred feet was about the average rate at which the work was driven.

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171. You mentioned that you had seen Mr. Randle on the work in Macquarie-street,—do you recollect if at the time you saw him it was before this suspicion had arisen? Both before and after. The suspicion, I think, began to arise through the agency of Mr. Randle's own Engineer, or rather upon the statements he made to the Committee of last year. It may, perhaps, one day transpire that these very errors were intentionally committed by this man, Mr. William Edwards, if we may judge from the part he took in the affair. He stated to many persons openly that he would make mischief, for the purpose of aggrandizing his own position, or for some other reason. I think if you refer to the whole of his evidence and read it, there can be but one opinion about it.

172. Do you think it was possible for any man of any professional experience at all, or of any professional capacity, such as Mr. Mais must have possessed before he was made your Assistant Engineer, to have gone down into that tunnel, as he must have done constantly—? It was his duty.

173. And day after day to have seen this brickwork going on, and yet to have certified fortnight after fortnight that it was fourteen inch work when in reality it was nine inch work,—is it within the bounds of possibility? As the question is put to me, I may say, that if he had performed his duty properly, it was morally impossible for him to see different lengths of that work executed, and to certify for it as fourteen inch work, when he ought to have known it was nine inch. From the limited extent of the work at this time, it was not so difficult for him to see whether nine-inch or fourteen-inch work was put in; but he must have neglected his duty very much, not to see that the work was inserted in accordance with my directions.

174. The work was carried on in Macquarie-street by sinking shafts at certain distances, and the tunnels were then driven from one shaft towards the next? Yes.

175. Measurements were made from fortnight to fortnight, and the additional work carried on between the shafts was measured? It ought to have been.

176. Upon the strength of these the payments were made to Mr. Randle? Yes.

177. These payments were made fortnight by fortnight; but was it within the bounds of possibility for these mistakes to have remained undetected when the whole street was measured? No; that must have resulted in a perfect knowledge of the quantity of the work.

178. These mistakes which were made, as to the additional length driven and the additional brickwork, could only remain undetected from the greatest carelessness until the whole street was finished? Only until the street was finished.

179. Then they must have been discovered, and the payments adjusted at that time? Yes.

180. *By Mr. Scott:* Since your discharge by the City Commissioners, have you been employed by Mr. Randle in any measurements or work? Not in the slightest degree, in any shape or form.

181. Were you ever employed by Mr. Randle to certify to a quantity of work done by that gentleman for the Australian Steam Navigation Company? Shortly after my appointment to office, Mr. Randle consulted me as to the best way to arrive at an admeasurement of the Patent Slip.

182. Earth or stone work? Earth work. My duties being heavy, and for one or two other reasons which I might have had at the time, but which I forget now, I declined further to act in the matter, and did not continue to do so.

183. Then you did not take any measurements, or certify to the correctness of the quantity of work done by him in any way whatever, at any time? Not at any time, nor under any circumstances. There was some litigation shortly after my appointment to office; he asked my opinion upon it, and I gave it. I think I went over twice; but he employed other persons to carry out the measurements.

184. *By the Chairman:* You said just now, in answer to a question by Mr. Lang, that the errors which were made while any certain sewer was in progress must have been detected when that sewer was completed? Yes, in the length of the work.

185. Would that have affected the length of the brickwork? If the brickwork were put in as ordered and intended; from the length we could calculate the quantity of brickwork. But if, as is the case in Macquarie-street, nine-inch were put in instead of fourteen, the discrepancy could not have been discovered.

186. You would have been in no better position to have discovered any error when the work was completed than when it was in progress? Far less, because we should not have had the opportunity of examining the thickness of the work. In fact the period during which the work is in progress is the only one when you can satisfactorily see the amount of work put in.

187. So that an error made in measuring the brickwork, while the work is in progress, is very likely to escape correction if not detected while the work is in progress? Yes.

188. *By Mr. Lang:* It would be only an error in the superficial surface of brickwork that you could correct? Yes; without destroying the work or boring it.

189. *By the Chairman:* Will you turn to page 31 of the Final Report; you will there find an analysis of the various tenders sent in for the construction of the sewer No. 1, and also your original estimate of the cost of the work. By that analysis you estimate that, under Mr. Randle's contract, the probable cost of the sewers in that section will be £54,870? Yes.

190. Do you know what the actual cost of the sewers constructed under Mr. Randle's contract has been? I do not.

191. We have it in evidence that the actual cost of the construction of sewers in this section amounts to £119,442,—how do you account for so great a disparity between your estimate of the probable cost under Mr. Randle's contract and the actual cost as now ascertained? With regard to the expenditure to the present time, I may perhaps be relieved from giving

W. B. Rider, Esq., an opinion, because, as it has been carried on by Mr. Bell, it may, perhaps, have been altered, or my plan may have been deviated from, and some portions of the work may be more expensive than I contemplated.

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192. This sum of £119,442, is simply for carrying out the contract entered into by Mr. Randle while you were in charge, and does not include any additional work? May I ask when this amount was made up?

193. It was given by Mr. Rae, on the 21st of last month, and includes not only the amount you paid but all that has since been paid? You must deduct, at least, nine months work, which has been carried on subsequently to my retirement from office. I believe the extent of work performed under me was about £96,000; and anything that may have been executed since I can hardly be held accountable for. I do not know what course Mr. Bell may have pursued in the expenditure of the difference between £96,000 and £119,000.

194. Mr. Bell has simply called upon Mr. Randle to carry out his contract in accordance with the agreement made with you? Perhaps Mr. Bell may not have carried out the work practically as I intended.

195. I may state for your information, that the work done by Mr. Bell, since you left, has been by means of open cutting, consequently it has been less expensive than it would have been if the system of tunnelling, that prevailed so generally while you were in charge, had been pursued by Mr. Bell? I do not think Mr. Bell in that respect has done the work differently from what I should have done; for at the time I relinquished office the whole amount, or nearly so, of tunnelling I contemplated had been carried out. In the other portions of the sewers I should most probably have adopted open cutting. Perhaps I should have varied in some instances where there were some local difficulties to contend with. I refer to Castlereagh-street.

196. Then, on your own shewing, the cost would have been about the same, whether the work had been carried on by Mr. Bell or by yourself? Very possibly, except in matters of detail, where he may have gone to a farther expense than I might have thought necessary. For instance, the expenditure for a chase at the bottom of the sewer, I should most likely not have gone to that expense.

197. You have no reason to believe that there would have been any material diminution of the cost of the sewers in No. 1 section, had you remained in office, from that which has been incurred under Mr. Bell? I should imagine not any great difference.

198. Taking that as a starting point, how do you account for so great a disparity between your estimate, founded upon an analysis of the tenders sent in, and the actual cost—the difference between £54,000 and £119,000? I think I stated to you, in the first instance, that this analysis was made upon the probable quantity of rock and soil; I calculated that there would be two-thirds soil and one-third rock, and, in a great measure, I attribute the increase in the amount expended to that.

199. To finding a larger proportion of rock than you expected? Yes; in fact, we found it nearly all rock.

200. Was there any other material cause for the increase in the cost of the sewer? Nothing more than the ordinary contingencies in works of this sort.

201. Has there not been actually a much larger extent of tunnelling than you had estimated for in making this analysis? I might state that that is another reason why the work has been somewhat increased in expenditure.

202. Is not that, in point of fact, the great cause of the larger cost for tunnels than you had anticipated? It may form a large proportion of the absolute cost, but not, as I stated before, of the ultimate cost.

203. Do you not think that this result, as compared with your estimate, goes to show that you had not made an adequate examination of the ground through which the sewers were to be carried, to justify you in entering upon the work? I do not think I had any option in regard to entering upon the work. The work had to be done, and my orders were to carry out the work to the best of my judgment. It was carried out accordingly; and, from information obtained from many persons acquainted with the strata, my analysis upon the schedule of prices was prepared and submitted to the Commissioners, and by them submitted to His Excellency the Governor General, and many other persons, who fully approved what I had done. Therefore, it was immaterial whether it was rock or soil.

204. Or whether by tunnelling or open cutting? Or whether by tunnelling or open cutting, except as I tell you, that local circumstances influenced me in carrying out a larger extent of tunnelling than I calculated upon.

205. Was there not a great disparity between the tender sent in by Mr. Murphy and that sent in by Mr. Randle for tunnelling and open cutting,—did not Murphy undertake to do the tunnelling at a much less cost than Randle? I believe that was the case, from what I recollect; but, on the other hand, I think Mr. Murphy was very much in advance of Mr. Randle's price for open cutting. I believe that in every item, with the exception of tunnelling, Mr. Murphy was invariably higher than Mr. Randle.

206. Will you please to turn to your evidence, at page 164 of the Report of the Select Committee of last year. You are asked, at Q. 34, "Will you look at page 18 of the printed evidence; do you see there the prices at which Mr. Murphy tendered for tunnelling in soil and tunnelling in rock?" You reply, "I do.—How much less are those prices than the prices at which the Commissioners have agreed with Mr. Randle? There is considerable difference.—You will see the difference in those items. You will find that Mr. Murphy's tender for tunnelling in rock in the 6 ft. sewer is £2 10s., while Mr. Randle's is £5. How does it stand with reference to the other items I have alluded to: does it not appear that in the 4 ft. 6 in. sewer Mr. Murphy tendered at £1 15s. per lineal foot, while the Commissioners have agreed to give Mr. Randle £4 10s. for the same work? Yes.—Does it not also appear that for the 3 ft. 6 in. sewers Mr. Murphy tendered at £1 5s., while the Commissioners are giving Mr. Randle £4 for the same work? Yes.—Does it not also appear

- “ appear that Mr. Murphy offered to make the 3 ft. sewers for £1, while the Commis-  
 “ sioners are giving £3 10s. to Mr. Randle? Yes.—Does it not also appear that for tun-  
 “ nelling in soil in the 6 ft. sewer Mr. Murphy tendered at 15s. per lineal foot, while Mr.  
 “ Randle is getting £2 5s. ? Yes.—Without going to other items, but taking the tunnelling  
 “ only, tunnelling in soil and rock, which has turned out to be much the largest item of the  
 “ whole work, does it not appear that Mr. Murphy's tender was somewhere about two-thirds  
 “ less than Mr. Randle's contract? Taking these items separately it does appear so, and it  
 “ has turned out so in the result; but had more soil been found and less rock, the result  
 “ would have been different.”—Now, looking at the replies you gave on that occasion, is it  
 not now apparent that if Mr. Murphy's tender had been accepted instead of Mr. Randle's,  
 and the same extent of tunnelling had been carried on, that the City would have saved very  
 materially by accepting Mr. Murphy's tender? Or any other tender—not only Mr. Murphy's.
207. I confine myself to Mr. Murphy's, for the purpose of comparison. I take Mr. Randle's  
 and Mr. Murphy's; there appears to be a difference between these two upon these particular  
 points? True; but may I ask why Farrelly's tender is not taken, when his is the lowest?
208. If you assert that Farrelly's tender for tunnelling was lowest, then it follows that, had  
 his tender been accepted, there would have been a still greater saving effected than would  
 have been by the acceptance of Murphy's; but we will confine ourselves at present to Mr.  
 Murphy's tender,—I wish to ask you again, referring to the answers you gave on the 27th  
 November last year, whether, if Mr. Murphy's tender had been accepted, it would not have  
 been a great saving to the City, looking to the way the work has been carried on? At the  
 period I made the analysis, I had not the slightest idea but that Mr. Randle's tender would  
 have been the cheapest, but it turned out in the result that more tunnelling was deemed  
 advisable than I had anticipated, and, that being the highest item in Mr. Randle's tender,  
 no doubt some money might have been saved on *that item* if another tender had been accepted.
209. Do you not think that, before you entered on an analysis of these tenders, you ought,  
 in justice to your professional reputation as an engineer, and in justice to those by whom  
 you were employed, to have made such a careful examination of the ground, by boring or  
 otherwise, as to determine how much soil and how much rock you would have to encounter,  
 and how much tunnelling or how much excavations would be required? I have endeavoured  
 to impress upon the minds of the Committee that it did not depend upon the strata  
 through which the sewers passed, but upon local circumstances, the City being, I may  
 term it, honey-combed by a number of drains, the position and course of which we could not  
 possibly discover.
210. Still these local circumstances which you urge in justification of the course you pursued,  
 would not have affected the quantity of rock and soil through which you would have had to  
 have carried these sewers;—that could have been determined by boring and actual examination,  
 could it not? No it could not. I was going, perhaps rather impertinently, to say, if you  
 were aware of the practical working of these sewers, you would know that sewers cannot be  
 determined by the strata, but must be carried at such inclination as will promote their  
 effectual discharge at the outlet. You cannot follow the undulations of a street, but must go  
 to certain depths, these depths being decided from point to point, and have a continual  
 inclination, whether it be through rock or through soil. From the information I endeavoured  
 to get at the time, I imagined these proportions would have been one-third rock and two-  
 thirds soil. I made the analysis of each tender with perfect fairness to the parties concerned,  
 and I found that Mr. Randle's was the lowest in the most important items, presuming that  
 the data upon which I made the calculation was correct.
211. Before you made any one sewer did you not determine the level at which that was to  
 be carried through the street? Yes.
212. And you would know at each and every portion of the street, to what depth the sewer  
 would have to go in order to preserve the gradient? Yes.
213. By referring to the various depths at the various portions of the streets, could you not  
 have ascertained the character of the ground through which the sewer would have had to be  
 carried? I could.
214. Do you not think, looking to the magnitude, the expensive nature of, and the difficulties  
 connected with, sewerage works, that you should have taken some preliminary steps to have  
 ascertained the character of the ground before you had entered upon the analysis? What would  
 have been the result?—the result would have been that I should, at any particular point,  
 have discovered that rock existed, and I should have to execute the work in rock, but such  
 knowledge could not influence the character of, or the mode of executing the work.
215. Supposing you had ascertained that rock was there, and that one tenderer had offered  
 to work through rock at a very much less price than another tenderer, would you not have  
 been in a much better position to have said which tender would have been the best to have  
 accepted? In making the analysis of the tenders, I again repeat that I did not think I  
 should have been in a better position—indeed I am sure I should not—to have arrived at  
 the better knowledge of the comparative merits of the tenders, taking the comparative prices  
 of each item, not any single one.
216. Do you mean to say if you had made this examination, and actually ascertained the  
 quantity of rock and soil through which you would have had to carry these sewers, you would  
 not have been in a better position to have ascertained the relative cheapness and eligibility  
 of the tenders sent in by Mr. Randle and by Mr. Murphy, than you were without making  
 such an examination; keeping, of course, in mind the great difference between the two  
 prices at which these gentlemen offered to construct the different works? If I had had a  
 perfect knowledge of the way in which the works would have been carried out or executed, I  
 might have been enabled to have arrived at a more correct idea of the comparative merits of  
 the two tenders; or not of the two, but of the many tenders sent in.
217. Would not that examination have also assisted you to some extent in determining  
 whether tunnelling would have been necessary from the character of the soil? No; I say  
 the

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W. B. Rider, Esq. the extent to which we have tunnelled has not at all been determined by the character of the soil.

17 Dec., 1856. 218. But by local circumstances,—such as the convenience of persons residing in the streets through which the sewers have passed—the safety of life and property, and other considerations of that nature? Yes; and, as I have already said, the chief has been the intersection of drains, also the ultimate destruction of the roads, and the constant expense to re-form them.

219. In the way in which the sewers have actually been constructed, supposing that Mr. Murphy's tender had been accepted in lieu of Mr. Randle's, can you favor the Committee with any estimate of the probable amount that would have been saved by the acceptance of that tender? I have not made a calculation; but, it could perhaps without difficulty be made.

220. Without making a calculation—looking to the great difference in the prices for tunnelling between Mr. Murphy's and Mr. Randle's tenders—is it not self-evident that the difference in the actual cost would have been considerable? Taking this item simply into consideration the cost would have been considerably reduced by the acceptance of Mr. Murphy's tender; but, taking the other items into consideration, I am not sure that it would have been, as you will find that every other item in Mr. Murphy's tender is very considerably in advance of Mr. Randle's.

221. Has not very much the largest proportion of the cost arisen from tunnelling through rock, through mixed-soil and rock, and, also, through soil? We have not tunnelled through soil.

222. Through rock and mixed soil? Yes.

223. Much the largest item of cost has been on these particular works? Yes; I think it has; in fact, I am sure it has.

224. If Mr. Murphy tendered to do this at two-thirds less or one-third less than Mr. Randle, is it not self-evident that, notwithstanding the higher price charged by Mr. Murphy for other portions of the work, there would have been a very great saving to the city by the acceptance of Mr. Murphy's tender? That is a matter of calculation, and I have not thought it necessary to go into it; but it is very possible that while the expense in the item of tunnelling alone may have been increased by the acceptance of Mr. Randle's tender, the cost might have been very much increased by the acceptance of Mr. Murphy's, from the greater price for every other item throughout the schedule.

225. Is it not the fact that tunnelling as compared with open cutting forms a very large proportion of the whole work? It does.

226. Then there would have been a greater saving on that proportion of work, as compared with the other, by the acceptance of Mr. Murphy's tender? Yes.

227. Then it follows, as a matter of course, that the saving, by accepting Mr. Murphy's tender, would have been much in excess of the extra cost for open cutting? I cannot tell that; it is a matter of calculation; I must see what the other items would have amounted to; Mr. Randle might have received a larger amount on that particular head; but, Mr. Murphy, on the other hand, would have received a much larger amount on other items equally necessary for the execution of the work.

228. *By Mr. Lang:* In considering these various tenders—if I recollect rightly, from statements made in the Legislative Council—at that time there were other things taken into consideration than mere cheapness—for instance, there was the capability of the different tenderers to carry out the work? Yes.

229. And it was stated, I think by Captain Ward, from an analysis made by him of the work, that it would have been impossible for Mr. Murphy to have carried out the tunnelling at the price at which he tendered—do you recollect if that was the case? It was; I have here the analysis of Captain Ward. (*The witness produced the same.*)

230. *By the Chairman:* I find, from running roughly over the certificate of the 8th of November, that out of a total sum of £75,141, about £48,000 was paid on this one item of driving in rock; forming, of course, nearly two-thirds of the whole amount paid? It may be so.

231. So that, if there had been any large saving in this item, such as would have resulted from the acceptance of Mr. Murphy's tender, it must have overbalanced any extra expense in the construction of any other portion of the work. Even assuming that Mr. Murphy had tendered at double the price charged by Mr. Randle for the other portion, the saving would have covered the total cost of all the other works? Yes, it might appear so; but under Mr. Murphy's tender the execution of these works would have been very much increased on every other item. I will refer to one item—that of brickwork. There is a difference between Mr. Murphy's and Mr. Randle's tender of £10 a rod, therefore if the former had been taken, the amount, under the head of brickwork alone, would have been much increased.

232. By running my eye hastily over this abstract, I find the amount charged for brickwork under Randle's tender is some £17,000 or £18,000—supposing Mr. Murphy's tender had been taken, say it would have been £52, while Randle's would have been £42—that would have involved an excess of about twenty-five per cent. on the brickwork? Yes.

233. Which would have made a difference in excess in the item of brickwork of £4,000 or £5,000? On that item alone, and to that period.

234. Taking that as a set-off against the £24,000 which would have been saved upon the item of driving in rock, still the balance would have been a very large one? It is unfair to the Commissioners, allow me to say, to decide upon the propriety of their conduct in the acceptance or rejection of either of these tenders, by considering that item alone.

235. I am taking the two extreme items? But there are other items which would have influenced the total amount of Murphy's tender very considerably.

236. Allow me to call your attention to the fact, that these two amounts would include about six-sevenths of the total cost, that is, tunnelling in rock £48,000, and brickwork £18,000,

or

or £66,000 out of £75,000? If you abstract these items from the two tenders, advantage would accrue to Randle; but if you take the whole of the items as contained in the certificate, and make out what work has actually been executed under Randle's tender, and adjust that to Murphy's, you will find that other items besides the brickwork would have increased the total amount of Murphy's prices, so as to bring the difference between the price paid to Mr. Randle for tunnelling, and the price that would have been paid to Mr. Murphy under his tender, very much nearer a balance.

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237. Are you prepared to say that, taking the whole sewerage works as they have been carried out, that the acceptance of Mr. Murphy's tender would not have resulted in a considerable saving to the City? I think I have stated that the difference would not have been very great between the acceptance of the one and the acceptance of the other tender, on the supposition that the one had the capacity for carrying the contract out.

238. Would there have been a similar difference in the event of Farrelly's tender having been accepted? The items that composed Mr. Farrelly's tender, if you look at it, appears so—what shall I say—so inconsiderate, that I am sure no responsible party wishing the work to be carried out at all, would have accepted it.

239. You said, just now, that you attributed a great many of these errors in the measurements to Mr. Edwards' interference in some way? I have attributed them to him, from what he is reported to have said himself, that he has purposely made them for the purpose of creating mischief.

240. How could Mr. Edwards in any way prevent Mr. Mais from taking a correct measurement of the work done? Mr. Mais neglected his duty in not going over the work equally with Mr. Randle's Engineer. It was as little to Mr. Randle's interest to have this work improperly performed as it was to the Commissioners.

241. You mean, to have the work over measured? Yes. He paid his men upon the amount of work performed, according to the certificates of Edwards. I believe, from what I can hear and understand, that this man, Edwards, for his own purposes, to which I will not allude, really allowed these mistakes to be committed, in order that he might come before a Committee of the House, and give evidence to that effect.

242. But Mr. Edwards could not prevent Mr. Mais from making correct measurements? I do not exonerate Mr. Mais; but, no doubt, Mr. Mais, knowing that Mr. Edwards' duties were the same as his own, namely, to see that the work was carried on properly, and that he had to check the work on the part of Mr. Randle, trusted to the reports made to him by Edwards from time to time.

243. But Mr. Edwards was not in the employ of the Commissioners in any way? He was not in the employ of the Commissioners; he was the person to whom orders were given by the resident Engineer to carry out the work.

244. Then he could have had no business to have interfered with the measurement made on behalf of the Commissioners? No, except that he, on the part of Mr. Randle, might see that the work was measured properly.

245. He had no authority to interfere with Mr. Mais in any way? Not the slightest.

246. Nor would it have been a matter of prudence for Mr. Mais to have called upon him in any way to have made his own measurements? No, except that he was the party trusted by Mr. Randle to make his own measurements, and in every instance, until his discharge, accompanied the parties admeasuring the work on the part of the Commissioners.

247. As a matter of ordinary professional prudence, Mr. Mais would not call upon Mr. Edwards, in any way, to assist him in making his measurements? It would be professionally wrong for him to do so; he had no business to trust to any but his own measurements; that was one of the principal purposes for which he was placed there.

248. I understood you to say, at your last examination, that Mr. Randle sent in to you a fortnightly statement of the quantity of work which he had executed during the preceding fortnight? Not regularly each fortnight; there were statements sent in, it might be at the end of the fortnight, or at longer periods; they might almost be considered as documents of his own, rather than as documents supplied to myself.

249. Did I understand you to say that these documents were furnished to you fortnightly? Not fortnightly; he was not called upon, in accordance with the conditions of that portion of the contract, to supply them regularly; I did not think it necessary.

250. In these memoranda, which Mr. Randle furnished you with, did he state the quantity of work executed in particular sewers during the period over which these memoranda extended? Whatever statements he sent in, and at whatever periods—they might have been fortnightly, or they might have been weekly—were statements of the amount of work executed or in course of execution.

251. In reference to the waterworks, did I understand you to say, in answer to a question by Mr. Scott, that you had not taken any levels for laying down the pipes along the Botany Road? I think I stated distinctly, unless Mr. Scott misunderstood me, or I misunderstood him, that I had taken careful levels.

252. And plotted a section. Yes.

253. Mr. Bell states that no record can be found in the office of levels having been taken, or a section having been plotted? Mr. Bell must be mistaken.

254. You are now speaking of plotting a section for laying down the mains? The levels were taken, and the necessary data connected with it ought to be in the office.

255. And there was a section of the road plotted? There was a section of the road plotted.

FRIDAY, 19 DECEMBER, 1856.

## Present :

MR. GORDON,  
MR. JONES,  
MR. LANG,MR. OXLEY,  
MR. PLUNKETT,  
MR. ROBERTSON,

MR. SCOTT.

RICHARD JONES, Esq., IN THE CHAIR.

W. Randle,  
Esq.

William Randle, Esq., called in and examined :—

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1. *By the Chairman*: You are the contractor for the sewerage works in what is known as section No. 1? Yes.
2. Will you be kind enough to turn to page 13 of that Report you have before you; you will find there a copy of the contract? Yes.
3. Will you be kind enough to state to the Committee what construction you put upon this paragraph :—" The contractor shall make out and deliver to the said Commissioners, at their office in King-street, on the Wednesday of every week, an account of every work that is put in hand, whether the same is completed or not; and on every succeeding day, correct duplicate daily vouchers or accounts, in writing, of each day and jobbing work executed on the preceding day, specifying in detail the quantities and measurements thereof, upon a printed form to be furnished by the said Commissioners." What did you by that condition hold yourself bound to do, in regard to furnishing accounts? In the first place, it appears from this that I ought to have had proper forms furnished to me; but I have always seen something like such a clause, not quite so stringent, in all contracts I have signed, but I have never been required to carry them out. I understand that such clauses as this are to be used only when contractors do not act up to their contracts, and the employers deem it necessary to keep them as close up as possible.
4. You consider that it is inserted to be held in reserve in case of necessity? Yes.
5. But not to be enforced as a matter of course? Contractors are never required to act up to a clause of that kind.
6. Did you render to the Commissioners any such accounts as are here specified—either weekly or daily vouchers? No; we measured once a fortnight on the works.
7. Did you measure on your own account? The Resident Engineer and one of my agents measured fortnightly.
8. Did you, on these fortnightly measurements, render to the Commissioners any account? I do not know whether I rendered any account, but the account was agreed to upon the works, that is to say, measurements were taken and booked together; the same measurements that were taken by the City Commissioners' officer were booked by my assistant.
9. Then you cannot inform the Committee whether your officer rendered to the Commissioners fortnightly a statement of the quantity of work he considered you had executed on account of the contract? I do not know that we furnished any account of our own, but we agreed to the dimensions that were taken on the work. My agent met the Resident Engineer, and they compiled a statement from these measurements, which they checked together; but whether it was made by my agent, or by the Engineer, or by both, I do not remember;—the latter is most likely, for I do not think we furnished an actual statement of the measurements from my office to the City Commissioners.
10. Do you believe you did not furnish fortnightly a statement of the quantities of work you had executed during the previous fortnight? I think we did not furnish it, except in the way I speak of.
11. Except by assenting to the contents of the Resident Engineer's certificate? Precisely, and these dimensions were taken together on the works.
12. In carrying on the sewerage works, who determined whether the works should be executed by means of tunnelling or open cutting? The City Engineer, I suppose. I, individually, never received any order whether it was to be open cutting or tunnelling; I never personally took any order from the Engineer as to the way in which the work should be done; I had an agent on the works by whom all orders were received and carried out under the instructions of the City Engineer.
13. That agent you held to be bound to carry out the instructions of the Engineer in reference to tunnelling and open cutting? Everything connected with the work.
14. Did you consider that he had any discretion in the matter? Not the slightest.
15. He was not entitled to exercise any influence as to whether open cutting or tunnelling should be resorted to? Unless he happened to be left without a distinct order, then he might progress as he thought best.
16. Did any cases occur in which he was left to exercise his own discretion in reference to tunnelling or open cutting? I did not personally superintend the work. I do not know whether my agent went on with the works without direct instructions from the Engineer. I have no reason to believe such a case occurred.
17. In carrying on the works, more especially in tunnelling, how was the character of the ground determined through which you carried them—how did you decide whether it was rock, or soil, or mixed, and, if mixed, what relative proportions the rock and soil bore to each other? It was first determined at these fortnightly measurements by the person who measured on my behalf and the Resident Engineer; there were some alterations made, I think, at the general measurement.
18. I speak now of the general measurement, as the work was carried on and measured on account? I had, in addition to this, for my own guidance, a certificate of an agent in addition to the measurer's. I had an agent on the works who certified to me, for my piece-work men, as to whether it was rock or soil they had been driving through, and I paid my men according

to

- to his certificate. My agent and the measurer, who is another person, accompanied the resident Engineer, and they agreed as they went along.
19. As I understand you, you had a measurer who measured with the resident Engineer, and in measuring they came to some mutual understanding as to what the ground should be charged? Precisely.
20. In addition to that, for your own guidance, you had a separate agent who went through the work on your account, and determined the relative proportions of rock and soil? Precisely. My agent accompanied the measurer and resident Engineer.
21. In the event of any difference arising between the person acting on your behalf and the resident Engineer as to how the ground was to be classed—? It was then referred to the Engineer-in-Chief. I do not remember the circumstance of any dispute having arisen until the general measurement, which took place, I think, in December. I am not clear whether there was anything previous to that.
22. You recollect no difference occurring between your measurer and the resident Engineer as to the character of the ground? No; it was not very possible it could occur here, as first of all my agent had been upon the work throughout the fortnight, and examined the work as it progressed; then there was the Resident Engineer who had been there on behalf of the Commissioners; and my measurer was a third person to certify what description of work was agreed upon.
23. Still there was a possibility that the Resident Engineer might hold that to be soil or partly soil and partly rock which your measurer would hold to be all rock? I do not remember such a circumstance.
24. Until the general measurement you spoke of, in January, up to December 31st? Yes.
25. In this measurement which took place in January, up to December 31st, did any differences occur between you and the Commissioners as to the character of the ground through which the sewerage had been carried? Yes.
26. Will you describe to the Committee the nature of those differences? We consented to a reduction in two streets—Pitt and Castlereagh Streets.
27. You consented to changes in the charges that had been made and sanctioned by the Resident Engineer, that had in fact been certified? Yes.
28. Will you describe the nature of the changes that have been made? In Castlereagh-street, 637 feet 6 inches was agreed to be considered as two-thirds rock and one-third soil, which previously had been charged as all rock, being a difference of 212 feet 6 inches of soil instead of rock, and reducing the amount the Commissioners agreed to pay, from £2,550 to £2,103 15s., leaving a saving to the Commissioners of £446 5s.
29. Will you state to the Committee what the difference was in Pitt-street? In Pitt-street 946 feet had been originally set down as being all rock, of which 315 feet were agreed to be accepted as soil instead of that amount in rock. The original amount passed for that portion of Pitt-street was £4,257, and the amount ultimately agreed to was less by £788 6s. 8d.
30. So that the only difference in Pitt-street was that 315 feet charged as rock were agreed to be charged as soil? That was the only difference. This 315 feet is not an actual length in the street in which there was no rock; it was an arrangement we came to, considering *there was some soil among the rock.*
31. As I understand you, the arrangement was this, instead of charging for the whole length as one-eighth, one-third, or one-half soil, as the case might be, you agreed to accept instead, a charge of 315 feet as soil and all the rest as rock? Yes. Allow me now to say that I do not think, as far as I was concerned, that they were justified in doing it; I believe, according to the evidence I got upon the strata, as we progressed with the work, I was entitled to be paid as all rock; I paid for all rock to my workmen.
32. Do I understand you to say that you paid in this case, in Pitt-street, for all rock, as had been certified for by the Resident Engineer? Yes, as it was certified for from time to time.
33. In regard to Castlereagh-street, were your payments in accordance with the Resident Engineer's certificate? According to the measurements of the 31st December, I was allowed eleven hundred and sixty-five feet seven inches of tunnelling in rock in Castlereagh-street, and I had paid for twelve hundred and three feet, being thirty-seven feet five inches more than I ultimately agreed to receive from the Commissioners.
34. Do I understand that you considered the charges that had been certified for by the Resident Engineer, were the correct charges? I did, and I hold that opinion still.
35. Then your impression is that you have sustained some injustice in being compelled to accept these reduced charges which the Commissioners required you to accept in January? It is.
36. You had actually paid your money as the work progressed, in accordance, substantially, with the certificates that had previously been given by the Resident Engineer? I had. I looked upon this as a compromise, in order to get a settlement up to a point. It was discussed so frequently, and had been previously, that I requested that the whole thing might be measured from the commencement, and that some settlement might be come to, and I accepted this as a compromise.
37. Do I understand that you have closed that dispute between the Commissioners and yourself by this compromise? Yes.
38. The terms they proposed to you, with reference to these disputed pieces of ground, were accepted by you as final? Yes. There is one point we have since yielded. We did at the time consider it settled, but since Mr. Bell, the present Engineer has been in charge of the works, he objected to a portion of Macquarie-street being paid for as all rock, and I had three shafts sunk down in the length of this disputed piece, 252 feet, and found rock in each of the shafts. They were sunk along side the sewer and equi-distant from each other—as I have said—rock was found in each of them, but not to the full height of the sewer in one. I have not settled

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- W. Randle, Esq. settled the question with Mr. Bell; and it is now a disputed point. I looked upon it as settled in December, but I have no objection to re-open the question which is now in abeyance.
39. What is agreed with reference to that? There has been no proposition from Mr. Bell. It is still an open question.
40. They still object to pay for it as all rock, but there has been no distinct proposal from the Commissioners as to how it is to be settled? No.
41. Do these embrace all the cases in which changes have been made in the charges originally made? Yes.
42. Will you give us the total amount in money, in the two streets, that you have consented to accept from the Commissioners less than the charges originally certified? £1,234 11s. 8d.
43. Will you be kind enough to describe to the Committee how the fortnightly measurements were made on your account—what steps you yourself took to ascertain what amount of work was executed from fortnight to fortnight, from the commencement of the works up to the time of the re-measuring? I had an agent employed by myself on the works to look after the way the work was carried out, and also to measure the quantity of work done every fortnight. He furnished me with a certificate of the number of yards of tunnelling or excavation done, and whether it was in rock or soil, and also the quantity of brickwork.
44. In fact all the work that had been executed during the fortnight? All the work that had been executed during the fortnight, and upon that I paid my men.
45. *By Mr. Plunkett:* Who was your agent? Edwards.
46. *By the Chairman:* Was this agent you now speak of the person who measured with Mr. Mais on your behalf, or was he a distinct person you spoke of as measuring to enable you to know what to pay your men? Yes, a distinct man; he measured on my account to enable me to determine what was to be paid by me.
47. Was he a professional man? I did not know anything of Edwards till the sewer works commenced; he was recommended to me, and I employed him, but I never had any previous knowledge of him.
48. Had you any other person besides Edwards engaged with the view of carrying on the measurements from fortnight to fortnight? Not at this time. So long as he was my agent on the work he was responsible to me. He employed people under him.
49. Was he a person who measured with Mr. Mais from fortnight to fortnight? He was present, but he did not take the dimensions for me against the Resident Engineer; he was present to take the dimensions for the Resident Engineer and my measurer; he did not keep the measurements as between me and the Commissioners, only as between my men who were at piece work and me.
50. Did you employ any person to keep the measurements as between yourself and the Commissioners? Yes. I do not think the same men measured from the commencement; they were changed from time to time. Mr. Gibbons was one, and Mr. Holland another; and I took one measurement, the first measurement I think, with the Engineer myself.
51. Can you describe to the Committee how the measurements were made? They were made, I suppose, by their going through the work; but I cannot account for the mistakes that have been made in the lengths of the streets.
52. Will you describe to the Committee the mode of measuring, as far as you are aware of it; who made the actual measurements, some one on behalf of the Commissioners; or were they made partly by their employee, and partly by yours? Their Resident Engineer represented them, and a measurer on my behalf represented me; Edwards, my agent, accompanied them, and I believe some person brought by the City Engineer; that I do not exactly know, but I can furnish you with evidence on that point, because the people who measured could be examined; one of them is still in my employ. The works at this time consisted principally of tunnelling; the shafts were down, and the tunnel driven a certain distance. I would imagine my measurer and the Resident Engineer came to the top of the shaft, and the men with them were lowered to the bottom, and took the dimensions from the centre of the shaft to the faces, so many feet, and from there so many feet north and south, and these dimensions, I imagine, were booked at the top by Mr. Mais and my measurer, instead of, as no doubt they ought to have done, going down and seeing for themselves.
53. Who were these men that went down to make the actual measurement? That I do not know.
54. Can you say whether they were men in your employ, or men in the employ of the City Commissioners? I think some of them were in my employ; they were not men paid day's wages by me, but men paid by piece work; men engaged in driving this work at per yard run.
55. Then have you reason to believe that Mr. Mais himself did not go down to make the actual measurement? That I cannot tell; I was not present, except at this one measurement. I was with them at the commencement of the works, to establish a system or form for them to make it upon.
56. Was your own measurer content to take the measurements of these men, who were interested in constructing the sewers? It appears so, from the fact of my having paid for more than was actually done.
57. Could you yourself have any practical check upon the accuracy of the measurements made? None whatever, if none of my people went down—if Edwards, for instance, did not go down—but he should have known, for he was on the work constantly; the measurer simply went round once a fortnight, to make the measurements with the Resident Engineer.
58. As the whole length of any given sewer was completed, or the length was completed from one known point to another, your measurer could then ascertain whether the quantity was in excess of the actual length shewn by the measurements on the surface? Yes, that was done; when all these headings were made, the streets were checked over the top by my agents, and in many cases found to be longer underneath than they were over the surface. The entire length is checked from the length of the street. 59.



59. In that case, what did you do with those employed by you with reference to the overcharges from time to time? No street was completed in which these differences occurred. I think I am right in saying that Castlereagh-street and the main sewer were the two places in which I found the greatest discrepancies. When we measured in December, these sewers were precisely in the state shewn here; I had changed my agent by that time, and I had the same agent then that I have now on the work. I sent him down to take the measurement from the centre of the shaft to the face, and on referring to the measurer's book for the fortnightly measurement previously, I discovered that they were very much longer in his book than they were from the actual measurements; but I had not employed the same people to measure that they had employed.

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60. Are the Committee to understand that you actually overpaid your men? Yes, I did on these periodical measurements from fortnight to fortnight.

61. How, in that case, did you adjust your differences with the men when you came to ascertain the actual length? As far as the mining was concerned, they never were adjusted; I lost the difference; but in the brickwork I have adjusted them, because the man is an honest man, and is still in my employ.

62. Because you had a hold upon the person executing the work? For that class of people he is a respectable man.

63. *By Mr. Plunkett:* In the way you describe, the measurements were taken by persons who went down into the tunnels, and these persons being persons employed by piece work, they had a direct interest in stating the measurements at more than they actually were? They had.

64. Was there any way of checking that, except by measurement above? None. My agent ought to have seen to it as the work progressed.

65. As the work went on, was there any means of correcting the quality of the work? Yes, that was seen every day.

66. By whom? It ought to have been seen every day by my agent, and the Resident Engineer.

67. Do you know, of your own knowledge, that they did see it? No, I do not.

68. *By the Chairman:* Are we to understand you to say, that neither your agent nor the Resident Engineer went down into the tunnels to make the actual measurements? That is to say that I cannot conceive the mistakes to have been made if they had gone down. I do not know, of my own knowledge, that they did not go down.

69. That is your presumption? That is my presumption.

70. Did I understand you to say, in the early part of your examination, that you did not furnish to the City Engineer, or the Commissioners, as far as you are aware, a fortnightly statement of the work executed during the previous fortnight? I did not send in a bill.

71. To let them know what amount you had a right to charge for? No.

72. The person acting on your behalf—the measurer—examined the Resident Engineer's certificate, and satisfied himself that that certificate was substantially correct, and you were content to take payment from fortnight to fortnight on an examination of the Resident Engineer's certificate? Yes.

73. You sent no bill? I think I sent no bill in bill form; there might have been a rough abstract taken by my measurer up to the Engineer's office and checked there, but no actual bill.

74. Would he leave this memorandum you speak of there? I do not know.

75. Would this shew the quantities of work you considered had been executed during the fortnight? It would. Perhaps only a portion might be made by my agent, and the other portion by the Resident Engineer. They met with a book in which they took the measurements of the work, squared the dimensions together, and made out an abstract.

76. They made out such certificates as were furnished to the Committee of last Session, and are shewn at page 140 of their Report? Yes.

77. Did you, or any person on your account, furnish to the Engineer, or to the Commissioners, abstracts similar in substance to these in the Report? I do not remember.

78. You cannot give the Committee any distinct information upon that point? No.

79. But your impression is, that you did not give them in a tabulated form? I do not know whether they were furnished. I only know the quantities and descriptions of work were agreed to between my agent and the Resident Engineer.

80. What check did you consider you had upon the certificates of the City Engineer? The quarterly measurement.

81. What check had you from time to time on the fortnightly measurements, so as to secure your receiving the full amount, or nearly the full amount, to which you were entitled? I had the certificate of my own agent.

82. Did you ever compare his certificate with those by which you were paid by the Commissioners from fortnight to fortnight? I believe they were substantially the same. I forget whether we measured on the same or different days, for the days have been changed from the commencement. I do not remember whether we measured on the same day, for the piece-work men, as the City Engineer measured. Here are the dates of the measurements, as furnished by my agent from fortnight to fortnight, by which I paid them; they were furnished by Edwards.

83. What are the dates of them? They commence on 15th June, 1855.

84. Have you got one of the 25th October, or any time between the 11th and the 25th October, or any date immediately earlier than that? I have one of the 19th October.

85. Ought that, substantially, to correspond with the Resident Engineer's certificate of the 11th or 25th October? This would be more than the one and less than the other. This is all that is done in a fortnight, whereas in that you have the total amount from the commencement. My agent only furnished me with the amount of work done within the previous fortnight.

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86. Could you inform us what amount you paid for driving in rock in Macquarie-street, up to the 19th October? Two thousand seven hundred and eighteen feet.
87. Can you now inform us of the amount you paid for brickwork, in the same street, up to the same date—the quantity of work, and the amount in money? I have only the total; it is not abstracted into streets; the brickwork we did not abstract in this way, being all of a class. Up to the 19th October, I had paid for two hundred and ninety-nine rods.
88. That is the whole amount paid, in all the streets, for brickwork? Yes. Up to the 25th October I was allowed for three hundred and nine rods, so that ten rods would have been the week's work. This goes to shew that I paid my workmen for the amount I was allowed for, from time to time, by the resident Engineer; and it also shows that whenever a mistake occurred, I overpaid my man, but being a good man, I did succeed in getting the work ultimately done. Up to the 8th December, six hundred and eighty-one rods had been paid for, and I paid him for the same quantity. I cannot shew this in the mining, for I paid for more work than was allowed, the man not being such a good man as the bricklayer. On the 19th September, I paid for 626 rods 84 feet of brickwork, and I was allowed only for 571 rods 91½ feet, so that I had paid for forty rods more than had been allowed for at that date.
89. Since this date, have you ascertained that you have paid for more brickwork than is now ascertained to have been actually executed? No, I have not paid for more.
90. Have you now ascertained that up to the end of November or October, you had been allowed for more brickwork than had been actually executed? It has all been paid for as it was executed, and I have paid for precisely the same quantities.
91. Have you recently ascertained that you had been allowed for, and had paid for, more brickwork, say up to the end of October, than was actually executed at that time. I speak of last year. Have you since ascertained that the quantity you were allowed for between the 19th and 25th October, represented more than was actually executed at that time? We have ascertained that.
92. Do you know to what extent? After the December measurement we found we had paid for 426 rods, while on the 24th January we were only allowed for 394 rods, which goes to shew that we had previously been allowed for more than was actually executed. I paid on these fortnightly certificates to my men, and whenever an error occurred, I got the money back, if I could, but in some cases it was impossible; but the same bricklayer is upon the work as was at the commencement.
93. *By Mr. Lang:* As this man was working at this brickwork all the time, and must have known, pretty nearly at any rate, what he was doing, how did it happen that he did not detect, as he went along from fortnight to fortnight, that you were paying more than he was entitled to? I do not know; but he never makes a measurement; I do not think he can measure; I never knew him to make a measurement of any work he does; he simply does his work and comes to the office, at the end of the fortnight, to receive his money; the account is made out by some one else; he does not know the number of rods he has done.
94. Are we to understand that you make out the amount of work that has been done from the returns you receive from your measurer and overlooker, and pay this man the amount, and that he takes it as a matter of course? Precisely; he never disputed the accounts.
95. Then you deducted this overplus afterwards from him? Yes; I explained to him that, on the examination of the work at the end of the quarter in December, 1855, it was found that the brickwork had been overcharged; that I had paid him for all that was certified to, from fortnight to fortnight; and that these, added together, measured more than proved to be actually done. I said I did not wish to make this deduction all at once, but that eventually it must all be returned to me; and it has been.
96. *By the Chairman:* Will you state again what quantity of driving in rock you found you had executed in Macquarie-street on the 19th October? Two thousand seven hundred and eighteen feet.
97. Then if the Resident Engineer on the 11th October certified that there had been executed in that street two thousand nine hundred and three feet of driving in rock, he certified for more than had been actually driven? Yes.
98. Did you, or did any one on your behalf, from time to time compare the certificates on which you paid your men, with the Engineer's certificates, on which you received payment, to see how far they tallied? I did not; but it is the duty of the clerks in my office to do that, to see that I do not pay for a greater number of yards than I get the certificate of the Engineer for, and than are actually executed; but in this case it turned out that the work was not actually executed, although I paid for it.
99. You are now speaking of the brickwork? Yes.
100. In this case of Macquarie-street you got a certificate for more than, according to your agent's certificate, was actually done. Here is a certificate that two thousand nine hundred and three feet were executed in Macquarie-street, while your own agent certifies for two thousand seven hundred and eighteen feet? That was all that, up to that time, I had paid for. That street was measured short in December by us in a check measurement; we chained the street through the sewer and over the top. I was present and saw it done. We sent two men through the sewer to chain it, and we chained it over the top. By some extraordinary mistake or other we made about forty-five feet difference; in fact, less than there is in the street, because it has since been measured over by Mr. Bell, and allowed; so forty-five feet must be added to that.
101. But supposing that your man of business, whose duty it was to compare these certificates, compared the Resident Engineer's certificate of the 11th October with your agent's certificate of the 19th October, and found that the Engineer's certificate was nearly two hundred feet in excess of that of your own agent, would it not have suggested itself at once that there had been some serious error in the measurements? No; it is usual in driving a sewer of this sort in rock to keep back an amount for what is called squaring up the sewer.

102. By the Engineer? By my foreman of works it should be done. It ought to be done in the same way that an amount per yard is deducted from me: the City Engineer deducts ten shillings per yard for what is called squaring up, till the brickwork is in. My agent ought to deduct an amount in proportion to the length of the sewer, also, from the payments to the man. W. Randle,  
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103. These deductions, of course, would substantially tally with the deduction made from the men? I agreed to a deduction of ten shillings per yard, but we did deduct in price, but in length; the City Engineer measures the total of the work, and deducts ten shillings a yard till the brickwork is put in, but my men deduct in the measurement.
104. Then you do not, as a rule, compare, or cause to be compared, your own agent's fortnightly certificate, with the certificate of the City Engineer? They should be compared in the office; they ought to have been compared.
105. Have you reason to believe they were compared? I think so. I have no reason to believe they were not, because I paid, from time to time, for the amount of work that I had received payment for, and then when a mistake occurred I had always paid for it; but the deduction was made from my account by the Commissioners directly. This abstract shews that they must have been compared, for the quantities of brickwork tally until a mistake occurs, and then there is a great difference. All these agree very nearly until this great mistake occurs in the December measurement, when I had paid for four hundred and twenty-six rods of brickwork, whereas I was entitled to receive only for three hundred and ninety-four rods; I had paid for thirty rods more than I had received.
106. Then your impression is, that there have been corresponding errors made by your agent, and by the Resident Engineer? It appears from actual facts that it was so, because I have always paid up to the certificate of my Engineer to my work people.
107. The measurements to enable you to decide how much you had to pay your men were taken at different times? Yes.
108. They were taken on alternate weeks? Yes. I can read the dates of my certificates. These are the amounts as paid to my workmen.
109. Can you understand how it is that the mistakes that have been evidently made by your agent should have tallied with the mistakes as evidently made by the Resident Engineer? I can imagine the reason, but not having been present I cannot state it as a fact. It appears to me that the same men were employed by my agent, between the piece-work men and myself, as were employed by the Resident Engineer, as between the Commissioners and myself; the same men were sent down the shaft to measure the work in the tunnel.
110. *By Mr. Lang*: These were the men who were interested? These were the men who were interested.
111. *By the Chairman*: Is it the customary mode of carrying out contracts in the mother country, for the person employing others, or the Engineer acting on his behalf, to trust to the measurement of the parties interested? It is not general. I have explained that all these things could go on for a while, while the work was in progress, but afterwards, on measuring over the street, we could check it all.
112. Supposing the measurement were honestly and uprightly made? Yes, but we can always check it afterwards; we made a measurement ourselves, in which there was a difference of forty-five feet; that might occur from a difference in the state of the tape, in a street of two thousand and odd feet long; if the tape were not good, or if it had been wetted, it might either have shrunk or stretched.
113. *By Mr. Lang*: Still, when the street was finished, the actual measurement must have been come to at last. Yes.
114. *By the Chairman*: Then, of course, you would assume that the person ultimately measuring it would not be guilty of culpable negligence, as the Resident Engineer appears to have been from time to time? It would require to be measured. It can, of course, be always correctly measured if people are so inclined.
115. They ought always to be so inclined? They ought always to be so inclined.
116. There is no more justification for these gross errors in the fortnightly measurements, than there would be for an error in the final measurement? It would be impossible for any person to measure the work every fortnight correctly.
117. You mean with strict and literal correctness? Generally there would not be time to do it.
118. Turning to the certificate at page 141, you will find one hundred and thirty-one rods of brickwork certified for in Macquarie-street? One hundred and thirty-one rods ninety-four feet.
119. You are now, I suppose, aware, that up to the 4th July last Mr. Bell ascertained that in that street there were only eighty-five rods, while on the 25th October previously the Resident Engineer had given a certificate for one hundred and thirty-one rods? Yes.
120. Is it at all possible that any person measuring the work from time to time could make a mistake of that kind—is that an error that could excusably occur? It is a very extravagant error, and I must confess that the same error was made by my own people; I do not know how to account for it; it is strange they should make a mistake of nearly fifty rods; there must have been some mistake in the multiples, or something of that kind.
121. You will perceive that in this certificate the charge is for one hundred and thirty-one rods of fourteen-inch brickwork—does it not turn out from Mr. Bell's certificate of the 4th July last, that the brickwork in that street was almost entirely nine-inch work? I believe it was very nearly all nine-inch; there was very little fourteen-inch work.
122. Can you understand how in these fortnightly measurements there were two errors of that kind? It is the same error. I suppose they have calculated that brickwork as all fourteen-inch, instead of nine-inch work.
123. *By Mr. Plunkett*: How did you pay for it? As fourteen-inch work, to my workmen.
124. I understand you to say that the mistakes made in the fortnightly measurements could not go on longer than three months? Provided the street were finished.

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125. How was it this mistake was never discovered till Mr. Bell discovered it, in July? I cannot account for it. We had corrected a great deal of this mistake, previous to Mr. Bell coming, in the December measurement; we made it then ninety-five rods instead of, as it now turns out, eighty-five. We corrected a large amount in the December measurement, but we calculated then upon fourteen-inch work for a great deal of it, while the end of the sewer was sticking out in Maquarie-street, shewing only nine-inch work, and at the lower end of the street the sewer has been always left open, and shews only nine-inch work—two rings—but we had, by some mistake or other, charged it as three rings, and I paid for it as three rings. And if you will allow me I will explain also about the bricks. You would suppose, of course, that I would know it could not have been done, as I would not require so many bricks for nine-inch work as for fourteen-inch, and that as I buy my bricks and pay for them; I would see that so much brickwork could not have been done, because I had not paid for a sufficient number of bricks to do it. But up to this time I had had my bricks from the Commissioners, and upon the certificate of the brickwork I paid for the bricks, that is to say, we calculate that 4,000 bricks will do a rod, and therefore I had paid the Commissioners for one hundred and thirty-one times four thousand bricks, on the supposition that 131 rods had been executed. When these deductions were made for the brickwork, I said there must be an error also in the amount I had paid for bricks, as it had been calculated upon the certificate of the Engineer, and I had paid the bricklayers for that amount of work; and that if there was to be a deduction made from the quantity of work, they must make a deduction for the bricks also. They could not understand at first that I was entitled to a reduction for these bricks.

126. *By the Chairman*: How long had the City Commissioners supplied you with bricks? Entirely up to that date, which enabled me to get at it; I think I got all my bricks from them up to December—up to the time when this mistake was discovered.

127. I see in the abstract of the 8th November, 100 rods of brickwork are charged for, while on the 25th of October, a fortnight previous, 131 rods are charged for? 31 rods would give 124,000 bricks more than we received; all the bricks were checked by my day-book afterwards, and I kept an account every day of the quantity of bricks received; but up to this time it was considered a fair supposition that for every rod of brickwork charged by me, I was chargeable with 4,000 bricks; and when the error was discovered, I saw the Commissioner, Mr. Rae, who had charge of this department, and said that as I had been made to refund the money for brickwork, of course, they must make the reduction from the bricks.

128. *By Mr. Plunkett*: Then you checked by the number of bricks used, and not by the measurement? No, the measurement was made fortnightly; for instance, 100 rods of brickwork would be certified for, and the cost of the number of bricks necessary to do that work would be deducted.

129. I mean as to the thickness? As to the thickness. If, for instance, I went up to the Commissioners for my money, and up to that 131 rods of brickwork had been certified for, I paid them for 524,000 of bricks, at £5 a thousand, or whatever the price might be; if on the following Saturday, when I went up I found there were only 95 rods, 95 rods multiplied by 4,000 would show the number I should pay for.

130. Into whose pocket did the money you were overpaid go? We afterwards rectified this brickwork.

131. That is as far as the reduction to 95 rods goes? Yes, but since it has been made correct.

132. Into whose pocket did the money go? The City Treasurer's, or rather there was no money passed for these bricks. Mr. Rae, the City Commissioner, undertook the general management of the brick arrangement. I saw him respecting the matter, as Commissioner, but I never paid for these bricks.

133. But for the work you paid for fourteen inch instead of for nine inch? Yes.

134. Into whose pocket did that go? Into the bricklayer's.

135. Was he a contractor under you? He was a person doing piece-work, the ordinary way of carrying out these large contracts.

136. Was it to the same person you paid all through? Yes, to Brian. That has been all arranged by this abstract.

137. Did you get any deduction from him? Yes.

138. *By Mr. Gordon*: Is there any record of this deduction in the City Commissioners' office? Yes. The way it was arrived at, at last, was this,—up to a certain time the Commissioners had, I think, no account kept daily, or at least I did not see it, of the bricks delivered to me, but I took my day book, and said "These are the bricks I have received from you, and the amounts I have received from you on account of brickwork do not tally with the quantity of bricks I have received." I did not add up these quantities from time to time, but, knowing that four thousand bricks would do a rod of work, I was willing to pay at that rate, and when these deductions were made, I went to the Commissioners, and took my book to shew the quantity received.

139. *By the Chairman*: Did the quantity, as entered in your day book, tally generally with the amended measurement? Yes, generally; but I did not get returned all that was due to me on this brick account—it was a compromise. I had to agree with them up to a certain time, during which I did not get an account from them from day to day of the quantity of bricks furnished to me. As far as their detail went it corresponded with the detail in my books, but the previous account would not tally; the mistake occurred at the time of the mistake respecting the brickwork.

140. *By Mr. Plunkett*: Where were these bricks taken from? From Newtown.

141. Did the Commissioners make the bricks themselves? The Commissioners made the bricks themselves.

142. Had they the sole property in the bricks? Yes.

143. Had any of these officers in any way an interest in them? I am not aware that any had the slightest interest.

144. *By Mr. Gordon*: In what way or with whom did you make the compromise? With W. Randle,  
Esq.  
Mr. Rae.
145. Would there be a record of that in the City Commissioners' Office? There must be. What I want the Committee to understand is, that I paid for bricks to the amount that was certified for brickwork every fortnight, and that I paid for labor to the amount certified for every fortnight, and that, unless I had had a good man who would do the work for which there had been the overcharge on the brickwork, I should have lost that as I did lose the overcharge on the tunnelling.
146. *By the Chairman*: I understood you to say that your accounts of the quantity of brickwork you had to pay for tallied generally with the amounts allowed by the Resident Engineer as having been executed? Yes.
147. Up to the 19th of October there was no material difference? No.
148. As I understand you, the measurements abstracted in the paper before you were made in the intermediate weeks between the fortnightly measurements made on the City Commissioners' account? Yes, from the dates it appears so.
149. Does it not appear more extraordinary that corresponding errors should have been made in these abstracts and those of the Resident Engineer than it would have been if errors had been confined to your own or the Resident Engineer's measurement? Yes; I cannot account for it. My agent is the man I looked to for my measurement. It is extraordinary that in both these fortnightly measurements, which were not made at the same time, there should be the same errors.
150. You can understand, or any one can understand, how one person could make a mistake in the quantity of brickwork, but is it not difficult to understand how two men making measurements at different times could make mistakes corresponding with each other? It does seem extraordinary; but I imagine it must have been done in this way,—indeed it is the only way by which I could account for it—that the same men were employed to go down to take this actual measurement. But the fortnightly measurements are not supposed to be exact measurements; in fact, it would be impossible almost—it is impossible—to measure work of that kind correctly, or anything like correctly, each fortnight, at the pace we were going.
151. But surely there was no necessity for such gross errors as these? No; unless, in taking down the brickwork, the man said it was fourteen inch, and they took it all as fourteen inch when it was only nine.
152. Then the only way in which you can account for this error is by supposing that your agent and the Resident Engineer, instead of making the measurement themselves, have trusted to the man who was carrying on the work by piece-work, and that this man misled both parties? That is my opinion.
153. *By Mr. Plunkett*: I suppose the Engineer knew that you had made this brickwork in Macquarie-street with bricks you had got from the Commissioners? I think so; every brick I had used up to that time I had got from the Commissioners.
154. Did not that place in his power a greater check upon the brickwork, as he would be in a position to learn the quantity of bricks supplied? But the bricks were delivered in many other streets besides Macquarie-street, and he had nothing to do with the bricks.
155. What officer of the Commissioners could have any check over the bricks? The man in the brick-field—the agent of the Commissioners in the brick-field at Newtown.
156. Who is there? I do not know him at all; I scarcely ever saw him. I never was in the brick-yard.
157. Have you been called upon to make good any defect in the work up to the present time? Pitt-street is the only place.
158. What is the defect you have been called upon to make good? The rendering in the bottom of the sewer, which is a very difficult piece of business as it is now. The three lower courses of brickwork were left unrendered as the work progressed, and I am now called upon to render it, which will put me to an enormous expense. I endeavored to execute it up to the springing of the arch, but did not succeed in keeping it dry; that, properly speaking, ought to have been done as the work progressed, but it was not completed, and I have had to finish it at my own expense.
159. Whose fault was that? The fault of my agent and of the Resident Engineer.
160. It was their business to see that it was done at the right time and in the right manner? Yes; my agent ought to have seen to it.
161. Is that the only defect you have been called upon to make good—have you been called upon to replace any bricks, alleged to be bad, in Bridge-street? No.
162. I find from a Report made to the Government by three gentlemen appointed to examine the work, that they describe some of the bricks used in the sewer at Bridge-street as defective? I speak from memory: I think the rendering is the only thing I have been called upon to replace.
163. In the course of driving the main sewer in the neighbourhood of Macquarie-place, did you fall into any error as to the right line—the straight line? Yes.
164. Will you describe the nature of the error committed there? As far as I recollect I examined the mistakes there, but it is so long ago I may be in error. I think it was in the neighbourhood of the Water Police Office. My agent should, either by compass, or by angular instrument, have set out a straight line; but instead of doing so, he made a kind of elbow, so that the two parties who were driving did not meet. This work I have since had to make good.
165. You have been called upon to do that, and have done it? Yes, in several places. Wherever I have been called upon to do so, I have done it, and have now made the line perfect; but it has cost me an enormous sum of money to fill up these parts where there was a deviation, and to excavate the straight line.
166. What did that cost alone? I believe the corrections in the main tunnel cost between five and six thousand pounds for work which had been actually certified for and paid for.

- W. Randle, Esq. 167. *By the Chairman*: By whom were you called upon to make these corrections in regard to the line? By Mr. Bell.
168. Had you been called upon by Mr. Rider or Mr. Mais to rectify this defect? I do not think we were.
169. Who called upon you to rectify these minor defects in the line? Mr. Bell.
170. Did you find Mr. Bell more rigid to enforce the strict conditions of his contract than his predecessors? Yes; but I think in many cases where I was called upon to expend a lot of money to put these sewers right, where it was perhaps only six inches out, there was no practical necessity for; that I was put to more expense than there was any actual necessity for.
171. You think Mr. Bell has been over rigid in some of these cases? I do.
172. Is there any statement you wish to make to the Committee in reference to the general execution of the work, to any circumstances connected with its execution, or in justification of what you have done in any matter respecting which there have been complaints? I have no statement at all to make, except that whenever anything was pointed out to me by the Engineer, whenever my own personal attention has been drawn to anything that has not been properly done, I have immediately had it put right.
173. There is no particular point you wish to explain to the Committee? I do not know of any, except that I would observe, as far as my own belief goes, it is as fair a piece of sewerage, or even a better piece, than can be found anywhere—it is too good, in fact.
174. *By Mr. Scott*: Looking to the great difference of the various tenders, as shewn in the Appendix to the final Report of the late Committee, I find that for ten feet your charge for tunnelling is £50, while Farrelly's charge for the same amount of work is £7—now, supposing Farrelly's tender had been taken, and the whole work had been done by tunnelling, would he have made anything by the contract, or would he have lost? He would have lost, of course.
175. Supposing, on the other hand, your tender had been taken, and the whole work had been done by open cutting, instead of by tunnelling, would you have gained or lost? I should have lost money, because I never conceived it would be done in that way.
176. Then I conceive that you made your tender, and that Farrelly made his, on an examination of the ground previously? No; I made no examination of the ground previously.
177. I cannot understand how you could have made a tender, unless from a previous examination of the ground you concluded the work would be done by tunnelling? I only went by the section in the Office. It did not matter to me what the ground was, as I had a price for rock, and a price for soil—a price for open cutting, and a price for tunnelling, whether in soil or rock. In the Engineer's Office was a section shewing the surface line and the line of the sewer, which would give the depth from the surface of the ground to the sewer, and I calculated there would be very little open cutting in a town of this size. I said wherever tunnelling can be used, there, of course, it will be used, because we would not break up the streets or inconvenience the traffic of the town. It would be a very serious loss to these people having shops to carry on the work by open cutting.
178. Therefore, you, thinking the chief portion would be done by tunnelling, accordingly put in a tender at the rate of £50 for 10 feet, and, I suppose, Farrelly had a contrary opinion when he put in a tender at the rate of £7? Yes.
179. We have been told, with respect to tunnelling, that in a street at Woolwich, 20 feet wide, in the busiest parts of Woolwich, all the work in the formation of a sewer was done by means of open cutting to the depth of 15 feet? But through what kind of strata?
180. Mr. Trickett says it was done under his own personal notice and superintendence, and that this soil is equally favourable with that of Woolwich? If the street were 20 feet wide and the cutting were 15 feet deep, it would be impossible for the street to hold the stuff thrown out.
181. He says it was absolutely done, and that in the construction of sewers, open cutting is the rule, and tunnelling the exception? I am of opinion that such a street would not hold it.
182. It was done in short lengths. He says it gives a better opportunity for doing the brickwork? In such a case they must cart the stuff away.
183. *By Mr. Oxley*: They opened the sewer in short lengths, and threw the stuff back upon it? In how long could they contract to do any amount of work? My contract was to complete the work in ten months. If you will allow me, I wish to make a remark as to the tunnelling and open cutting, with reference to a matter which put me to an enormous expense. A question was put to me when I was before the former Committee, as to the tunnelling in Macquarie-place, but as I was not then in possession of the facts, I could not speak on the subject. I find that in some places I had not more than two feet of soil above the top of the sewer there; but I paid for it as tunnelling of course. In some places this broke through, and I afterwards put in brickwork there at my own cost.
184. *By the Chairman*: By whose direction? Mr. Bell.
185. *By Mr. Scott*: Did Mr. Mais or Mr. Rider give you instructions in writing or verbally? I never got any instructions direct; the instructions were given to my agent.
186. Who was your agent? Mr. Edwards, up to November the 2nd.
187. Did the Resident or City Engineer ever certify up to the 8th November to any work being charged as half soil or half rock, or say that it was all soil and all rock? Yes, in Elizabeth-street; you will see it in page 141 of the Report.
188. I see 370½ feet driving in rock and 370½ feet driving in soil? That is half.
189. Was that originally charged as driving in rock, and did you afterwards make it half rock and half soil? I consider that as all rock.
190. I have kept notes as well as I could of your brickwork in Castlereagh and Pitt Streets, but I cannot make the work tally at all with any of the abstracts I see of any date. On what

- what date did your statement, which should agree with the Engineer's certificate of the 11th October, go in—I refer to Pitt and Castlereagh Streets? I have no abstract of any particular street. W. Randle,  
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191. On the 11th October I make the total amount to 249 rods 145 feet? I make it 259. 19 Dec., 1856.
192. You received for 309 up to the 19th October? No; I paid for 299 rods, but up to the 25th, I had certified for 309; but then there is the week's work.
193. Turn over to the 25th of October. I make the work 289 rods and some feet? I make it 309.
194. There is a great difference in these quantities—what is the difference in the size of these sewers—the main sewer is six feet by four? Yes.
195. What are the others? Four feet six by three and three feet six by two.
196. Then you have three sizes? No; we have four distinct sizes, and four different prices.
197. You stated that on one occasion you took a measurement yourself? Yes.
198. In what street—do you recollect? I do not; it is quite two years ago, in the early stage of the work, to get the general arrangement of the work.
199. *By Mr. Lang*: It was your first fortnightly measurement I think you said? Yes; it was on the 19th June, 1855. There were  $7\frac{1}{2}$  rods of brickwork at that time; that must have been in Bridge-street.
200. *By Mr. Scott*: You stated that the measurements took place with one of your men and one of the Commissioners in the tunnel? Yes.
201. And you have since ascertained that very egregious errors have existed in consequence? Yes.
202. At what time did you find out these errors, or were you told of them? It must have been about the 8th of November.
203. I believe you stated that the very men who were actually engaged in brickwork and tunnelling were the parties who assisted in the measurement in your behalf? No; I said I could only account for these errors having crept in by supposing that they did so in that way.
204. Did you ever enquire of Edwards whom he employed to measure? No, I did not.
205. Had the reverse been the case, supposing you had been, not the contractor but the party for whom the tunnel was being made, would you have considered this an equitable way of measuring? I should.
206. That parties interested in the result should be engaged in measuring? I do not know that they did.
207. Was it not your business to know? I had an agent acting for me, whom I believed to be an honest man, and so long as I place confidence in an agent, I would not question him on such a subject; when I cease to have confidence I dismiss him. I believed Mr. Edwards to be an honest man, and therefore I placed confidence in him.
208. What do you believe him to be now? I believe that he is not, from the results.
209. I think you stated that a man named Brian did the brickwork in Macquarie-street, did you not? Yes.
210. Did you pay him fortnightly? Yes.
211. Of course he took whatever you paid him without knowing the measurement? I do not believe he knew anything about the measurement.
212. But he got paid for fourteen-inch brickwork when he had done only nine-inch? He did not know that.
213. What! was he so ignorant? It was not put down on his bill, he was simply paid for so many rods of brickwork.
214. He must surely have known whether he was paid for so many rods of nine-inch brickwork, or for so many rods of fourteen-inch brickwork? A rod of nine-inch brickwork is precisely the same as a rod of fourteen-inch—a rod of nine-inch is worth as much as a rod of fourteen, but you do not get so much in length or in area.
215. In length, you would have nothing like the length, you would only have about half the length? That is it.
216. Do you think Brian did not know that? There was no length given in his bill; he was paid on a bill made out by my agent, and the dimensions were not given.
217. Do you not know that many of these people who cannot either read or write can calculate mentally? Many can, no doubt.
218. And he could not tell the difference whether he was paid for fourteen-inch or nine-inch from the length? He did not know anything about the length.
219. Does he not, during the week, take a rough measurement of his work? I do not think he ever did so in his life; indeed I do not think he can make a measurement.
220. Did you ever send in a quarterly account to the Commissioners? I think I did; if I did not send it in as an account, I sent it in, in the same way as the fortnightly accounts, that is to say I agreed with the Engineer.
221. You say in your evidence given before the former Committee that you sent in an account, probably a letter—I cannot understand whether you sent in a regular account of measurements and so forth every quarter? I do not think I did; I think we measured with the Engineer, in the same way as for the fortnightly accounts, and corrected any error, but I am not sure that I sent in any bill.
222. So many feet; so much due on account of work done? I do not think we did, previous to December.
223. You sent in no quarterly account? Not a bill.
224. You have stated, I believe, that you paid your people on Edwards' certificates? Yes.
225. And that, owing to these certificates being false, you had overpaid on a good deal of work? I did.
226. And that you had lost that over-payment? I did.
227. What is your opinion with respect to Mr. Edwards giving such certificates—with these egregious

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- egregious errors staring you in the face? My opinion is that he neglected his business, and of course I would not employ him again.
228. And that Mr. Mais was guilty of the same thing? He was.
229. Had these errors not been discovered, of course you would have made a profit by the additional brickwork, and the additional tunnel, that is to say, the profit over and above what you pay your people? It so happened that there was no profit at all upon the brickwork.
230. But upon the tunnelling? There could not be a mistake in the tunnelling, because when the tunnels are finished, without going into them at all the length can be checked. It is only necessary to measure on the surface to ascertain the length of the tunnelling.
231. *By Mr. Lang*: So that when the tunnelling is finished you must inevitably come at the length? You can measure the top as well as a field; but in the case of brickwork, you must multiply the length by the area, and by two or three rings.
232. *By Mr. Scott*: I find in Macquarie-street, by the certificate of Mr. Mais and Mr. Rider, dated 25th October, the sum charged for the various items is £18,703 15s.? Yes.
233. By Mr. Bell's corrected account, on the 31st of March, it is £13,242 10s. 11d., making a difference of £3,461 4s. 1d. in error. Now, if to that you add six and a quarter rods of brickwork, certified on the 31st of March, amounting to £262 10s., that makes a difference of £3,723 14s. 1d. in that one street,—do you see that? Yes.
234. Now in Pitt-street sewer, according to the certificate at page 139 of the Report, there are 3,577 lineal feet driving in rock, at £4 10s., amounting to £16,096 10s.; that was certified by Mr. Rider and Mr. Mais. Mr. Bell in his corrected account of the 31st March makes the sum total for driving in rock £12,555 15s., thereby shewing an error in the charge for driving in rock of £3,540 15s.? It appears so, but I do not know it.
235. It appears so from Mr. Bell's account of the 31st March? I do not think that is a fair way to put it, for I am not aware of any account of the 31st March.
236. He has settled with you for that? No, he has not.
237. Mr. Bell has stated that he had furnished you with that account? I received a copy on the 28th of May last, which I did not acknowledge, not having been present at the time of measurement. In that question you are taking the maximum amount of Mr. Rider and Mr. Mais, and the minimum amount of Mr. Bell?
238. Yes. So I see? These errors were corrected by ourselves, or by themselves, before Mr. Bell came.
239. Looking at that paper (*referring to Mr. Bell's Report*), are you paid in accordance with that paper by the City Commissioners? I am not. I speak upon Mr. Storey's authority: he has had the entire control of this account.
240. I wish to ascertain from you, seeing that these egregious errors have been made—I have taken them at the extreme—seeing that these errors have been carried on from fortnight to fortnight, carried on systematically—whether you think it would be a correct way in future to make your measurements to have a person appointed on your side, and a person on the side of the City Commissioners;—is it a correct way of measuring work as between a contractor and his employer? Yes.
241. You say so still with all these items staring you in the face? I do not see any other method; it is the method usually adopted.
242. Have you no means of checking these measurements; supposing these parties had made the amount £10,000 too little had you no means of checking your own people? Not if I employ rogues.
243. Then should you say Edwards was a rogue? I do not say that; but I say he did not conduct his business properly at the time these works were going on, and these errors crept in. Of course I had to get a staff about me, and to take such people as I could get in the Colony; if I had had a little more notice of these heavy works falling into my hands I could have got a properly organized staff about me, and I feel assured that had I done so these errors could not have crept in; there is, however, no other method of taking these measurements than the one I adopted; the only difference would have been in the shape of the material, the character of the people I should have employed.
244. I think you stated that the people who held the tape had an interest in the work? I did not state that I knew that.
245. But now that you do know it—? I do not know it; I say that I assume these men to have been employed, and that is the way the mistake occurred.
246. I will call your attention to these junctions, charged from time to time, increasing from a few up to 480 in Macquarie-street? That is so absurd a mistake that it appears to me to stamp the whole thing with carelessness more than anything besides.
247. You must understand that carelessness is a very different thing from system; if you look back you will find that these increase gradually from fortnight to fortnight,—on the 19th July 12 junctions are charged; then on the 1st August 12 junctions; again, on the 16th August, 12 junctions; again, on the 30th August, 12 junctions? Yes.
248. On the 13th September 95 junctions? Yes; 95 junctions.
249. On the 27th September 95; 11th October 95, and so on; and then on the 25th October it goes up to 480 junctions? It goes from 95 to 480; I do not see anything very gradual in that.
250. On the 8th November they sink it to 464 junctions, as if they had re-measured the work? I see 464 junctions, and 16 junctions and driving, that makes 480 junctions; that is the same amount—they go up from 95 to 480. It appears to me a most extraordinary thing that they could have made such an account as this, having the length of the street before them; it must have been gross carelessness, for they could not have put in such a number in the length of street unless they had stuck them all close together.
251. And your man Edwards certified to these junctions as well as Mr. Rider and Mr. Mais? I believe so; I do not know. I did not take out the junctions but the brickwork and the driving as being the heavy amounts.



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252. You looked over your accounts I suppose? As much as I could.
253. Did you not ascertain this error at once? If I had observed it I should, certainly; but I did not; according to this the junctions would not be six feet apart.
254. With respect to these bricks you had from the Commissioners, you purchased them upon a certificate—upon some bill sent in—who gave you this certificate? I had no certificate for bricks sent to me.
255. I understood you to say that Mr. Rae told you that he had in his possession an account of the daily delivery of bricks? I did not say that, at least, I think not; I said Mr. Rae produced, for a portion of the time, daily accounts of bricks sent to the works; and when my day book was brought to bear with their detail, so far as their dates were entered, they agreed with my dates and quantities; but previous to that I had no check upon the quantity of bricks charged except by the quantity that should have been used; it will take four thousand bricks to a rod of work. To illustrate my meaning I will suppose a case:—From June to December I will suppose that I got certificates for brickwork amounting to 100 rods, that multiplied by 4,000 would be 400,000, and for these 400,000 I am charged by the Commissioners; afterwards it is discovered that errors are made in the measurement of the brickwork, and that I have been over-paid; I have paid my men for labor, and I have also paid for bricks, calculating the work to have been 100 rods, and I require re-payment from the Commissioners for the bricks which I have been over-charged.
256. I simply wish to know if you had no check, by means of your agent, upon the bricks delivered on the spot? Yes.
257. Did he certify to the amount actually received? He simply entered it in a book day by day.
258. The sum total of these bricks, say on the 19th October—did your account of the bricks then received tally with the amount which Mr. Rae said had been delivered to you? I had no statement from Mr. Rae up to that time.
259. Subsequently? A long time subsequently. I will explain the matter to you, in a few minutes. When I got the corrected certificates of brickwork from the Engineer, and the deduction was made from my account, I said, assuming that so many rods of brickwork were done, I was paid for that amount, deductions for the quantity of bricks supplied being made at the time of payment; but as it appears that the amount of brickwork certified for has not been done, the quantity of bricks charged to me cannot have been used, therefore, I am entitled to deduction on account of bricks.
260. Then Mr. Rae absolutely charged you for bricks for fourteen inch work throughout Macquarie-street? For the number of rods I had been paid for.
261. I again repeat, I am taking these extremes to show what errors may exist in different departments. I am looking at the City Commissioners' Department now. There are 131 rods of brickwork—fourteen inch—was this certificate by Mr. Mais to the City Commissioners—who had the management of these bricks? Mr. Mais certified to the quantity of work.
262. Whoever he was, he must have charged you for bricks supplied for 131 rods 94 feet of fourteen inch brickwork? That would amount to just as much as if it were nine inch.
263. Supposing you had been charged for bricks for 131 rods of brickwork when there were only 85 rods, there must have been an excess in the charge of 184,000? Yes, but there might not be that difference at the time of making this arrangement.
264. I only wished to know how Mr. Rae could keep his account? But Mr. Rae never furnished this account.
265. Have you ever employed Mr. Rider since he has been discharged from the City Commissioners' service? No.
266. Did you never employ him before he was discharged? I once consulted him.
267. Did you not employ him? No, I did not.
268. He did not give you any certificate that certain work had been performed for the Australasian Steam Navigation Company—he did not certify to that work? No; but allow me to explain. I did consult both Mr. Rider and Mr. Mais upon the Steam Navigation Patent Slip, but they never completed the business; it was respecting the quantity of work executed there.
269. *By the Chairman:* What kind of work? Masonry and earthwork; but I never got from Mr. Rider a statement at all upon it.
270. *By Mr. Lang:* That was early in the history of the work? Yes, that was very early; I suppose eighteen months ago.
271. *By Mr. Scott:* This error in the sewer near the Water Police Office you state has cost between four and five thousand pounds? Not that alone; the total corrections in the main sewer; not this alone.
272. And you stated that this work had been certified to previously by your agent as having been sufficiently accurately executed? Yes; I paid upon my agent's certificates every week.
273. I thought you meant Mr. Mais' or Mr. Rider's, perhaps? They also certified.
274. Then the work was certified by your agent, Mr. Mais, and Mr. Rider? Yes.
275. Did Mr. Rider require you, when he discovered this mis-direction of the tunnel, to correct it? In one place there was a deduction made in the main sewer. I think this was the place. We could not tell how far we were wrong until we attempted to meet. We discovered we were wrong before we were quite through,—one heading would have gone by the other. A deduction of £100 was made from my account to put this piece right. I think this was the only piece discovered in December; but afterwards we found we were wrong in many places.
276. *By the Chairman:* That was by Mr. Rider? By Mr. Rider. We had not met during Mr. Rider's time; these headings were only partly driven between the shafts.
277. Then Mr. Rider did direct you to alter these errors? Yes; the deduction of £100 to which I have referred was made from my account to defray the cost of correcting this error.
278. *By Mr. Robertson:* I understand you to say that you have paid Brian, the sub-con-

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tractor for the brickwork, too much for his work, and that he had made you compensation subsequently for that? Yes.

279. Now, could it have been possible that, when you paid that person too much money, that he was not aware that such was the case? Yes.

280. You think it would be possible not only for Mr. Mais and Mr. Edwards to make such mistakes, but that Brian, who was interested in the matter, and who, it appears, was alone benefited by the mistakes, might be mistaken also? He might have found, after paying his men, that he had a greater balance for himself than he had calculated upon, but he would not know how that arose, because he did not take the dimensions himself. He was simply paid at my office, on a bill made by my agent, and had nothing to do with the measurements. He might fancy a mistake had been made, and would, perhaps, be rectified the next pay-day; but I do not expect men of his class to come and tell me if they get a little more than they expect to receive.

281. I thought you said he was a good, honest, upright man? I believe him to be so, of his class.

282. It appears that this person was paid too much money by you, and considerably too much money? Yes.

283. And you say he could scarcely have received that greater amount of money without knowing there was an error somewhere? No.

284. You think, however, that he might have been under the impression that he was not paid too much? Yes. I can explain if you will allow me. I pay him the same rate per rod for brickwork in open cutting as for brickwork in tunnelling, and the open cutting brickwork can be done for considerably less than that in tunnelling—I should say 25 per cent. less. It might happen that he would not observe particularly whether he was doing the greater amount of work in tunnelling or cutting; that would make a considerable difference in his total receipts. If he were working for a fortnight in tunnel, and doing none in open cutting, he would scarcely have money to pay his men; but if, during another fortnight, he were doing the brickwork in open cutting, he would have a large amount to the good.

285. You think this man Brian relied entirely on your agent's statement, and knew nothing about the matter himself? I do.

286. At the time you entered upon the contract with the Commissioners, was there any arrangement made as to what should be considered rock, and what soil? Not when we entered upon the work.

287. Did you not contemplate that a difficulty might arise as to what should be considered rock, and what soil? I considered that the question might arise, but that it would be settled, from time to time, between my agent and the resident Engineer.

288. You did not think it necessary for you and the Commissioners, as principals, to take any action in the matter? No.

289. How was it settled at last,—what arrangement did you come to? I think, in the December measurement, another Engineer was appointed by the Commissioners to assist at the quarterly measurement, and his opinion, as to what should be rock, did not coincide with what had been arranged between my agent and the resident Engineer. On going through the account at the close of the measurement, it was left by the Engineer to the Commissioners to settle. I would not agree to any reduction, as I stated that I believed it to be rock at the time; ultimately, however, in order to get the account settled up to a point, I agreed to a reduction.

290. Was not that a very loose and unsatisfactory way of making a contract—having nothing clear with reference to so important a matter? It ought to have been clear before; when the certificate was given by the Engineer for the work as rock, I ought to have been paid; the question ought not to have been opened up.

291. Then you think it was proper that it should be left to the Engineer and your agent to decide? Yes.

292. In the carrying out of large contracts in England is this done? It is so.

293. When you speak of your agent, and of the Engineer, do you allude to Edwards and Mais? Yes.

294. These gentlemen, it appears, you have not a very high opinion of, with reference to their attendance to their duties? From the result, I cannot have.

295. Had these people the entire control in this great matter? Yes.

296. A matter which, I believe, involved the question, whether you should be paid £5 a foot, or whether you should be paid 8s? No; £5, or £2 5s.

297. Might there not have been some improper understanding between the Engineer, your agent, and the sub-contractor, in order that the latter might be improperly paid? It is quite possible.

298. Do you not suspect that such was the case, as a matter of fact? I do not.

299. *By Mr. Lang:* That is just the question I was going to put to you—whether you did not suspect that these men, who committed errors so great and palpable—errors which brought to this sub-contractor, or piece-worker, so large an amount of money,—do you not think it extremely probable that these two men, Edwards and Mais, must, at any rate, have suspected that this man Champion was charging you for more work than he did? Edwards knew as a fact that he was charging too much, at least it turned out to be the fact afterwards.

300. That he knew it? Not that he knew it, but that he had certified for more work than was performed.

301. It turns out that, on one stated period, there was an overpayment to the amount of £3,000? That is taking the extreme.

302. Say it is £2,000, which is not the extreme. Now you have shewn that you have paid this money yourself, and the consequence is, that if Champion received that amount of money more than he was entitled to, for work done, he must have known that he had that over and above his bargain? If he had received all, but he had only a portion of it; a good deal of the error is in the brickwork, and he had nothing to do with that. 303.

303 That would still leave about a thousand pounds for driving in rock? A proportion, of course, Champion got from my agent's certificates, which he ought not to have got.

304. Do you think these men, Edwards and Mais, even allowing for any amount of carelessness they could possibly have committed, could have gone over this work fortnight after fortnight and allowed Champion to make these overcharges, unless they had had some interest in it? I think it quite possible; my reason for saying so is, that a gentleman now in my employment assisted in these fortnightly measurements. He has been in my employ the last twelve or fourteen years, and I would entrust him with any work or any amount of money.

305. How do you imagine then that the error could have occurred? I imagine that he stood on the top, and trusted to the men who went down to measure, and took the measurements from them as they called them out.

306. So that he left it to Champion himself to measure his own work? Precisely.

307. In that case, on Champion's measurement you paid for the brickwork? If it were so. I cannot imagine how these mistakes could have crept in, unless these men of Champion's went down the shaft and measured the work.

308. Can you give the Committee any idea of what sum you paid to these people over and above what they were entitled to? £1,290. His work was not then in a fit state to receive the brickwork in the main tunnel, where these mistakes occurred.

309. Did you then discharge Champion before Mr. Bell joined the Commissioners' Department? Yes. These mistakes appeared when the two headings passed each other instead of meeting, or half a sewer met the wrong half of the opposite sewer. That entailed the necessity of going a long distance to bring it in correctly, as Mr. Bell required.

310. These mistakes seem to have gone on for a length of time. Suppose Mr. Mais did not go into the tunnel, and Mr. Edwards did not go into the tunnel, how could they have certified what was rock and what was soil? The stuff had to come up the shaft, and, if it were examined at once, they could see what it was; but, if it were left exposed to the weather for some time before they examined it, a great deal of it would have the appearance of soil.

311. Did your agent certify, in that loose way, as to the number of yards of soil and of rock? Yes.

312. Do you think he ever certified as rock what was really soil? I cannot say that. He never certified for any tunnelling in soil to me.

313. So that you paid all through for rock? I paid all through for rock. During the time he was with me he certified that it was all rock.

314. You paid for it as rock under his certificate? I did; and afterwards I consented to a compromise, which amounted to £1,200 or £1,300.

315. *By the Chairman:* Supposing it should be proved, on our examination of Mr. Mais, that he did go down into these tunnels, and made a personal examination of the work—can you then understand how such gross errors as those I have pointed out to you could have occurred? No. I could only then understand that it might have occurred by the men who measured with him, in the dark, pulling up a handful of the tape, or catching it round his leg, that could easily be done by a sharp fellow.

316. Supposing the Engineer were a trustworthy and faithful man, desirous of doing what was right to his employers, if he had to measure in places of the kind, would not ordinary prudence suggest that he should have men to assist in measuring upon whom he could rely? Yes, particularly afterwards. I can say it has taught me a lesson.

317. Would it not be improper for an Engineer to employ any man to assist him, not directly under his own control—should he not be a person in whom the Engineer had confidence? It would have been better, no doubt; but I fell into the same error. I believed the man to be honest.

318. But, in your case, you trusted to your own man? Yes..

319. But supposing Mr. Mais, instead of trusting to his own men, had trusted to men employed by you, who had an interest in the work—would it not have been highly improper? He ought not to have done so.

320. You say, that if it be proved that Mr. Mais went down and made a personal examination, you cannot understand how these errors could have occurred, except upon the presumption that the man with him gathered up the tape? Yes.

321. And you think, suppose he employed other men than his own to measure, he did what no trustworthy Engineer would do? I can only say that a gentleman in my employ, whom I deem highly trustworthy, and who has been with me many years, did the same.

322. Did he employ another person opposed to him? Yes; a man who, if he overmeasured, would be over paid by me. I paid Champion for more work than he had done. It appears to me to have been a want of sharpness altogether.

323. *By Mr. Scott:* Have you kept any account of the number of bricks received by you from the Commissioners? Yes.

324. Have you the dates attached to them? Yes.

325. Could you furnish such a statement to the Committee? Yes. (*Vide Appendix A*)

326. *By Mr. Lang:* Could these errors have occurred if you had had a properly organized staff? No.

327. Could these errors occur again? No. I was obliged to employ people I did not know. I could scarcely get sufficient people to keep a check.

328. How many works had you in operation at the time—it seems to have been all a muddle together? Yes. I had several large works going on at that time.

329. Beyond what you could look over yourself, and beyond what you had a staff to overlook? Yes. I wish to explain that I was never paid up to anything like the amount certified. The Commissioners always retained a considerable amount of money in their own hands. I have here a statement of the amounts held by the Commissioners from time to time, over and above what they were entitled to retain. (*The Witness handed in the same. Vide Appendix B.*)

W. Randle,  
Esq.

19 Dec., 1856.

W. Randle,  
Esq.

## APPENDIX A.

ACCOUNT of Bricks received from the City Commissioners by William Randle.

19 Dec., 1856.

Date.	Quantity.	Date.	Quantity.	Date.	Quantity.	Date.	Quantity.
1855.		1855.	205,592	1855.	394,144	1855.	515,917
June 7	3,600	July 10	14,015	Sept. 11	9,029	Dec 13	4,531
" 8	3,600	" 11	15,683	" 12	7,929		
" 9	1,800	" 12	17,580	" 13	11,611	1856	
" 11	4,000	" 13	11,715	" 14	8,945		
" 12	9,881	" 14	6,112	" 15	1,400	April 10	666
" 13	9,965	" 16	3,000	" 17	1,333	" 11	800
" 14	8,116	" 17	7,700	" 18	333	" 12	800
" 15	14,262	" 18	15,050	" 19	666	" 14	800
" 16	3,100	" 19	15,750	" 20	333	" 15	1,800
" 18	1,500	" 20	4,150	Oct. 27	5,596	" 16	1,467
" 19	1,500	" 21	4,300	" 29	8,537	" 17	1,666
" 21	2,000	" 23	250	Nov. 3	666	" 19	1,374
" 22	6,382	Aug. 24	666	" 5	3,665	" 21	1,332
" 23	3,814	" 27	1,499	" 6	4,064	" 22	2,101
" 25	9,298	" 28	3,904	" 7	4,798	" 23	1,026
" 26	12,229	" 29	4,596	" 8	6,130	" 24	1,451
" 27	12,739	" 30	7,401	" 9	4,764	" 25	2,515
" 28	12,447	" 31	1,166	" 10	2,664	" 26	1,670
" 29	10,364	" "	4,730	" 12	5,063	" 28	1,678
" 30	6,815	Sept. 1	4,287	" 13	4,071	" 29	2,739
July 2	4,800	" 3	3,283	" 14	3,663	" 30	2,000
" 3	13,481	" 4	8,260	" 15	5,063	May 1	2,000
" 4	11,897	" 5	7,960	" 16	2,664	" 3	1,247
" 5	10,299	" 6	7,095	" 17	1,332	" 6	387
" 6	11,564	" 7	4,032	" 19	999	Sept. 3	1,800
" 7	8,557	" 8	6,629	Dec. 10	6,329		
" 9	7,582	" 10	7,679	" 11	6,728		
				" 12	3,098		
	205,592		394,144		515,917		551,767

MEMO.—Less Bricks returned to the Commissioners ..... 29,842

521,925

Paid Commissioners for { 553,914 Bricks (common)  
30,590  
584,504

## APPENDIX B.

## SEWER CONTRACT.—W. RANDLE.

ABSTRACT showing Dates, Amounts, and Payments upon Certificates, with Balances which were and should have been retained under Contract.

No.	Date.	Amount of Certificates.			Amount of Payments.			Balance Retained.			Balance they ought to have retained under Contract.		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
	1855												
1	June 19	2,796	1	1	1,500	0	0	1,296	1	1	1,279	12	1
2	July 5	6,428	1	3½	4,786	0	0	1,642	1	3½	1,642	16	1½
3	" 19	12,725	7	9	10,725	7	9	2,000	0	0	2,272	10	9
4	Aug. 1	20,663	19	1	17,663	19	1	3,000	0	0	3,066	7	10
5	" 16	31,326	11	8	20,663	19	1	10,762	12	7	4,132	13	2
6	" 30	38,495	9	10	23,663	19	1	14,831	10	9	4,849	11	0
7	Sept. 13	52,445	0	2	26,663	19	1	25,781	1	1	6,244	10	0
8	" 27	55,822	8	6	39,638	19	1	16,183	9	5	6,582	4	10
9	Oct. 10	60,286	19	3	42,638	19	1	17,648	0	2	1,446	9	1
10	" 24	69,466	16	1	58,653	19	1	10,812	17	0	2,364	8	9
11	Nov. 8	75,241	2	11	68,683	19	1	6,557	3	10	2,941	17	5
12	" 22	77,741	9	11	71,683	19	1	6,057	10	10	3,191	18	1½

WEDNESDAY,

WEDNESDAY, 31 DECEMBER, 1856.

Present:—

MR. JONES,  
MR. LANG,MR. OXLEY,  
MR. PLUNKETT,

MR. ROBERTSON.

RICHARD JONES, ESQUIRE, IN THE CHAIR.

Henry C. Mais, Esq., called in and examined.

H. C. Mais,  
Esq.

31 Dec., 1856.

1. *By the Chairman*: What profession are you? Civil and Mechanical Engineer.
2. Have you been employed in that capacity at home? Yes.
3. How were you so employed? I was employed on three different railways, namely, the Great Western, the Bristol and Exeter, and the Wilts, Somerset, and Weymouth Railways.
4. What offices did you hold on those railways? First of all, I was articled to one of the Resident Engineers, and served my time for seven years to him.
5. Who was he? Mr. William Peniston. That was on the Great Western line. He was then transferred to the Bristol and Exeter line, and I went with him as assistant. I afterwards left him, and went to a manufactory at Birmingham, where I served my time as a mechanical Engineer. I also went from there back to the Swindon works on the Great Western Railway, where I became acquainted with the locomotive department. From that I came to this Colony.
6. When did you arrive here? In December, 1850.
7. What office did you hold under the City Commissioners' Department? I was employed on the Sydney Railway when I came here first. I was appointed on the railway to hold the office during the time that elapsed between the departure of the first Chief Engineer and the arrival of his successor, the then Chief Engineer going home, and another Chief Engineer arriving out here. I was Acting Engineer for eighteen months. From the railway I went into private business, and from that I went to the City Commissioners' Department, where I remained for eighteen months.
8. At what date did you go into the City Commissioners Office? I think in January or February—I will not be certain which—in 1855; I think it was in January.
9. When you applied for the appointment under the City Commissioners Department, did you furnish any testimonials? To the Engineer I did; I sent all my testimonials in to him.
10. Were these submitted to the Commissioners? Yes, I know they were.
11. Can you describe to the Committee the character of your testimonials? I forwarded them to the Railway Commissioners, according to the Order of the House, upon the motion of Mr. Flood; they can all be obtained in that way. The Railway Commissioners hold them.
12. Was that during the present Session? Yes. The testimonials are from Mr. Peniston, on the Great Western, Bristol and Exeter, and Wilts, Somerset, and Weymouth Railways; Mr. Charles Kemp, and from Mr. Capper. I have also further ones from the Railway Commissioners.
13. When did you leave the City Commissioners' Department? In June, this year.
14. What was the cause of your leaving? I felt myself in rather an uncomfortable position. In fact I wished to leave long before I did. I gave three months notice of resigning my situation; they accepted the resignation, but would not accept the three months notice; they accepted one month, and said I might remain two months if Mr. Bell chose, and I did remain under him. I then obtained a situation under the Railway Commissioners, and left at the end of the month.
15. You passed from the City Commissioner's Department to the Railway Commissioners? Yes, straight.
16. What office did you hold under them? I was employed by them to get out estimates for the Campbelltown extension. They then instructed me to prepare drawings for pumping machinery for the Liverpool station, and afterwards to prepare a design for a Tyre bending machine. I was sent up to the work to superintend the manufacture of the machine, as I had designed it. It was carried out and answered the first day as well as it does at this moment. After that my engagement ceased rather abruptly—at least I consider so.
17. When did you leave the Railway Commissioners? On the 31st of October last. I have entered into private business for myself again, in partnership with a mechanical engineer.
18. Your chief duties, when you held the appointment under the City Commissioners, had reference to the sewerage? Both water and sewerage. There were only myself and Mr. Hooper at that time in the office.
19. Were you chiefly occupied with the sewerage? Yes, chiefly. For the first two months I was occupied on the waterworks, and in making drawings for pumping machinery required at Botany. Mr. Hooper then had charge of the sewers, so far as the plans were then prepared, for there was no contract entered into at that time; but Mr. Hooper having lived at Botany, it was thought desirable to change the staff, and I was transferred to the sewerage staff.
20. Were you transferred to the sewerage staff before the sewerage works actually commenced? Yes.
21. What situation did you hold? Assistant Engineer.
22. Resident Engineer? Not resident; there was no occasion for that.
23. You performed the duty usually performed by a Resident Engineer? Yes.
24. Will you describe those duties to the Committee? My duties, first of all, were to see to, and, if there was no one else to do so, to prepare the working drawings for carrying on the works; in the second place, to satisfy myself that the work was properly done; and also to measure the work every fortnight, or whenever a day was appointed.

- H. C. Mais, Esq.  
31 Dec., 1856.
25. Your special duty was to see the plans of the Chief Engineer carried out? Yes, unless he altered them; I had to receive instructions from him. I was an irresponsible officer. I had no authority to alter any plan.
26. You were responsible to him, and he was responsible to the City Commissioners? Yes.
27. You were charged with the supervision of the work? Yes.
28. As to the quality of the material and the character of the work? Just so.
29. And also to take the measurements? Yes.
30. Was it your business to determine the proper charges for tunnelling and excavation? No; that was already determined by the schedule of prices.
31. I mean as to the character of the soil through which the sewers passed? It was not my place to determine that. I had to make out a certificate, which was forwarded by me to the City Engineer. I never saw it afterwards till called upon to copy it.
32. You certified, from fortnight to fortnight, to the Chief Engineer, that there had been a certain amount of driving in rock, of brickwork, and other kinds of work during the past fortnight, so that primarily it depended on you whether the ground should be charged as soil or rock, or mixed? Yes.
33. Did the Chief Engineer give you written instructions from time to time? Verbal instructions, no written ones. He frequently went round with me on measuring days—constantly, in fact; he kept his own measurement book as well as myself.
34. How did you determine from time to time how the work was to be carried on—by reference to the Chief Engineer? The plans were at once carried on, and as the work progressed it was easy to see whether it could be carried on according to the original design; if it could not, it was altered by consultation together. If I saw anything that was not quite practicable, or if I thought it was expedient to lower the gradient or alter the size of a sewer, by conferring with the Chief Engineer, explaining my reasons, and arguing the point together, we soon came to a decision whether it was right or wrong.
35. Have you ever taken it upon yourself to make alterations without consultation with the Chief Engineer? No.
36. You always allowed the ultimate responsibility to rest with him? I did.
37. In reference to tunnelling, for instance, who decided whether the work was to be done by tunnelling or by open cutting? The Chief Engineer.
38. With regard to the thickness of the brickwork—? That was chiefly carried out according to the sections. The sections were drawn, shewing the thickness of the brickwork to be executed, and the Commissioners having signed those plans, of course they could not be altered without their sanction. So they were carried out as far as they could be from the original sections.
39. In these were the thicknesses described? They were both drawn, and I think also written; I am not positive, but I believe it was so.
40. Were they written from time to time or from the beginning? When they were first proposed; there was one red line I think along the line of the sewer where there was nine inch brickwork, and a double red line where there was fourteen inch work.
41. When any changes were afterwards found necessary, were the requisite corrections made in the sections? I think in many cases they were; for instance, the junctions. None of the junctions were carried out, that is to say, the large street corner junctions, where three streets meet; I did not approve of the original design; I thought it was improper, and I had fresh plans made and carried out; by reference to the plans you could see the old and the new mode—the new plan shewing a greater or less thickness of brickwork, or, perhaps, a greater or less rise in the crown of the arch where it would come too near the top of the street.
42. What special instructions had you with reference to the supervision of the work? I had to go on the best way I could from one end to another, and I also had to superintend the two gentlemen in the office who were drawing the sections, so that my time was tolerably well occupied.
43. What assistance had you? None but these two draughtsmen, and they did nothing but that; I had no assistance in the supervision of the work.
44. Up to what time are you now speaking of? I think about November twelve months; I think a gentleman named Orford was then appointed Clerk of Works, whether it was in October or November I cannot positively say.
45. The supervision, up to the time you speak of, was carried on almost entirely by yourself? Entirely by myself as far as I could.
46. How many sewers were going on at that time? The main tunnel, the Pitt-street sewer, the Bridge-street sewer, the Macquarie-street sewer, and a portion of the Elizabeth-street sewer were being carried on at that time. In fact, they were all open up to the time that the works were stopped, last year. I think about October or November the works were partially stopped; they were suspended for a short period, and nothing was done, and, up to that time, I carried on the whole duty.
47. Did you find yourself able to perform the duty efficiently or satisfactorily to yourself? I had as much as I could do—rather more—but I think I could manage it. I had to be exceedingly sharp.
48. Did you ever apply for additional assistance? I spoke several times to Mr. Rider, and, eventually, he did get a clerk of works.
49. You say it was your duty to make all the measurements? Yes.
50. Will you describe to the Committee how you discharged this duty? Once every fortnight there was a day appointed for measuring, that is to say, on Thursday, an agent on the part of Mr. Randle, met myself and Mr. Rider, conjointly, at the end of the tunnel, and we commenced by measuring the open cutting with the tape; we each had a book, and sometimes I took one end of the tape, and any man we could get held the other. When we measured we went down the shaft, and whatever men we could get held the tape, while I booked it; whatever

whatever laborer happened to be about did the duty. That duty was continued all throughout, making whatever memoranda might be necessary, as to what kind of stuff, whether tunnelling or open cutting, and the same with regard to the thickness of the brickwork, and the length that was done. After that was done, we then, on the Thursday afternoon—if we could manage to finish it, which was hard work to do, because the measurements had to go in on Friday morning—we then had to reduce all these lineal measurements into rods of brickwork and feet or yards of cutting or tunnelling, and to price them according to the schedule of prices; that was then made into a bill and certificate, and handed over to the City Engineer.

H. C. M. is,

31 Dec., 1856.

51. Did you usually make these measurements alone, or was Mr. Rider commonly with you? Mr. Rider was often with me when making these measurements, because he kept a measurement book of his own. He was not there always, but he was there very often; I cannot say how often.

52. *By Mr. Lang:* It was a frequent practice? It was.

53. *By the Chairman:* Did you always make these measurements yourself—did you always go down the shafts into the tunnels? Not always; I mostly always went down the shafts, but sometimes I did not; for instance, if we came to a place where we knew it was driven through between certain points, instead of going down the shaft we would take the measurement over the top, or else make a memorandum on the section, because the ground cannot alter in length; the measurement through the tunnel and over the top must agree. In that way we got the length in any one place, unless it was the quarterly measurement on the 31st December, when we measured the whole of the works performed by these different people; there were men above and men below then to check one another.

54. Did you generally go below to make these measurements? We generally went below.

55. When any fresh work was executed in any portion of a sewer did you always go down to examine it? I examined that during the week, at times when I happened to go below; when holding the tape I had not time to examine the actual quality of the work; it was presumed to have been examined before.

56. Did you go down the sewer to make the measurement over fresh work? Certainly.

57. Are the Committee to understand then that in all these measurements you have made you have been over the work yourself either once or oftener? Yes; I went down the shaft. I cannot say I saw every brick in it, because I could not see it, nor could I see every foot driven; but I could see it when it was done; I could not see every foot, or two feet, or three feet—it was impossible for any one. For instance, I might be at the sewer when they were putting in the invert; I might then be called away to another portion, and by the time I returned the arch would be turned, so that I could not see the work performed in the intervening period.

58. In measuring any given length of tunnelling, of instance, would you go down at the time you were measuring, or at any other time, to examine for yourself the character of the ground, and to ascertain whether it was through rock or soil? I did.

59. With regard to the brickwork, you were either down at the time the work was going on, or at the time you measured you went into the tunnel to measure the brickwork and examine it? I did.

60. These examinations you made yourself—you did not remain on the top, and trust to other persons to tell you whether the brickwork was nine or fourteen inch? We have done that occasionally, not often.

61. And whether the driving was through rock altogether, or partially through rock and partially through soil? No; we never trusted that to others, for if once down in a place we can tell whether it is rock or soil, because when we see a miner at work we know at once what the stuff is; therefore, if I was going over that work again, I should know what it was.

62. Personal inspection of one end of a tunnel would not inform you what ground was at the other end of that length? No; I would go through. I have been throughout every portion of the work.

63. You measured with the tape? Yes.

64. Not with a chain? Sometimes. We measured this street three or four times with a chain.

65. The laborers you have spoken of were laborers in Mr. Randle's employ? Yes.

66. Were they generally on piece-work? I do not know; they were chiefly miners; I fancy they must have been.

67. Were they paid by the yard of excavation, and by the rod of brickwork? I cannot say positively, but I do not think they were day laborers. There might have been a few about.

68. Were they all in Mr. Randle's employ? Yes; the City Commissioners had no men employed.

69. In making these measurements, is it customary for those who measure on behalf of the persons for whom the work is executed, to measure with the assistance of the laborers of the contractor? It is a very common occurrence at home in railway work, if engaged in measuring up cuttings or tunnels, to call a man off the work. In fact, by a clause in the contract the contractor is bound to furnish men, because in many instances we could not take men of our own. Where it was necessary to measure work the contractor was bound to find men; and not only for that, but for setting out the work.

70. But in carrying on measurements in a place like a tunnel, where it is dark, what guarantee had you for the correctness and honesty of the men who were holding the tape at one end, as they were not your own men? No further than this, that when the work is completed we can compare it with the length of the street. It cannot be longer than the street actually is. Therefore there is a general check at every quarterly measurement, when Mr. Randle sends in a bill of the whole of the work completed. On these occasions two men went below and measured, and two men measured above; and the one checked the other.

71. But supposing, for the sake of argument, that in making these fortnightly measurements you

- H. C. Mais, Esq.  
31 Dec., 1856.
- you had men to assist you in holding the tape, who made a practice of deceiving you, and that you had made out a certificate, with their assistance, which proved to be in excess of the amount of work actually done—in what position would the Commissioners be if they had paid a large sum in excess of the value of the work executed? They never could pay such an amount as the per centage off the certificate would amount to.
72. What was the per centage? I think seventy-five per cent. was paid.
73. Was it not ninety per cent.? I do not know.
74. Anything in excess of ten per cent. in error in your certificate, would involve the payment of a greater amount than the actual value of the work? If it could be carried on to such an extent, of course the Commissioners would be losers if they could not come upon the contractor to refund; there would be no other remedy; but I could not imagine that such a thing could occur. It is an extreme case to suppose that a certificate for work of that description could exceed the actual amount due by ten per cent., because not only does it come to be remeasured at the end of three months, but the contractor is only to be paid for the work actually measured and certified by the engineer at the end of the three months. If he sent in a bill for three times the amount that was due he would not be paid, and if we found any error in the previous quarterly certificate he would not be paid for it; but I never discovered such an error; I have discovered errors in my own measurements many times, and have corrected them as fast I found them out.
75. Having made the measurements, you then proceeded to compile the certificates from the measurement book? I did.
76. Did you hand these certificates to Mr. Rider? I forwarded them to Mr. Rider; I put them on his desk for him to see.
77. Did Mr. Rider sign these certificates? He did.
78. Did he take any steps to ascertain the accuracy of your measurements? I cannot answer for that. I know he was sometimes with us when we did measure, and therefore he would be able to see whether we were right or wrong; and I know that in the quarterly measurements he took a great deal of trouble to go through every item.
79. I speak of the fortnightly measurements? He would not have had time. I do not believe he did.
80. Would he have any means of ascertaining whether the fortnightly certificates were correct? None, but taking his own book, or mine, and working it out, by checking it himself, or getting some one else to do it.
81. Then unless he had taken this trouble, to work your calculations out, his signature on your certificates would, practically, amount to nothing? I suppose not. It is usual on engineering works to do so, if the engineer in the position I held signed the certificates, which I had no business to do. When a certificate was sent in to the Chief Engineer, he would sometimes go through it to see that it was correct, and at other times, if busy, he would sign it on the faith of its being correct.
82. Mr. Randle had an agent who measured with you at the same time you did? Yes, three different agents of Mr. Randle measured with me.
83. Mr. Randle's agent measured for the purpose of seeing that he obtained from the Commissioners the payment he was entitled to? Mr. Randle paid his men on the alternate fortnight, and I think he measured as much then to check his own men as for other purposes—to see that he was not paying his men too much.
84. Mr. Randle stated to the Committee that the measurements he made, for the purpose of paying his men, were made in the intervening weeks? I dare say they were, but his agent measured with me—either Mr. Gibbons, Mr. Holland, or Mr. Storey.
85. What was the the presumed object of Mr. Randle's agent measuring at that time? I suppose to satisfy himself that we made the payment due to him.
86. Were you in the habit of shewing the results of your measurements to Mr. Randle's measurer? Not the result, but the actual figures that were called out, of course, we both booked; the lineal lengths and the thickness of the brickwork were put down in our own books as called out by the men; a perfect stranger could stand by and take out these lengths. The working out was left to myself, and I did it at my own house in the evening; there was not time at any other period of the day.
87. Did Mr. Randle render any account to you or the Chief Engineer every fortnight? Not to me, and I do not think he did to the Chief Engineer either; he did not do so during the first part of the contract, but I think that lately there were forms made on purpose. That was a neglect, in the first instance; there should have been forms printed on purpose.
88. Did Mr. Randle, or his agents, at any time, complain of the inaccuracy of your measurements, of your having allowed less than the actual amount of work executed? I do not think he did. They have complained on the work; for instance, Mr. Randle's agent has complained when I have said "so much"—(I have said "No, I will allow you only so much")—he has said, "that is not fair." That is the only observation which may have passed. Mr. Randle never has personally, nor has his agent, complained of the certificate; for I was supposed not to see it when it left my hand; it went from me to the Chief Commissioner, and was sent back endorsed by the Commissioner. It was my duty to enter it into the regular book kept for the purpose.
89. Your belief is that Mr. Randle did not furnish any fortnightly accounts? Not up to a certain date.
90. Up to the time of Mr. Rider leaving the City Commissioners' Office? No.
91. Are you aware that there have been some very gross errors discovered in regard to some of the sewerage work? I am aware, because I have heard of it. I know I have made some errors myself, in the length of the work, repeatedly; and, when I found them out, I corrected them in the next measurement. As they were found out they were corrected.
92. In measuring, did you take any steps to correct any errors that might have been made in the previous fortnight? Not during the fortnight.



93. Were the measurements so conducted that the measurement of one fortnight would, to some extent, be a check upon the previous one? In some instances they were not; in others, if I made a mistake in the measurement of one portion of a street, from one crossing to the other, I did not go over that a second time; most likely I would transfer it to the second measurement; but if I went over it a third time, and measured it from beginning to end, my business no doubt was to alter it.
94. What was your practice in reference to these fortnightly measurements—did you measure each time throughout, or did you take up the measurement where you had left off previously? I generally went back, not always.
95. The rule was to measure throughout? The rule was to measure throughout. It was not a rule, but it was a practice, as a check; it was done for that very purpose, in fact. I think I originated the idea to avoid error.
96. Sometimes you only measured from where you left off the previous fortnight? Sometimes we only measured from where we left off. We made marks where we measured to—where we started from a certain length up to a certain point.
97. Did it ever occur that you allowed more than one fortnight to elapse without measuring the work throughout? Sometimes a month.
98. Did you ever allow more than a month? I do not think I have; I cannot speak positively; the thing is almost out of my mind. I have not thought over the matter lately.
99. Can you understand how from fortnight to fortnight, in two, three, or four certificates, serious errors could be repeated? It must have been from that cause and no other. I took the length from a certain point to another. I looked to the section for the length and took the section as the length. I remember an instance, in particular, in measuring Macquarie-street. There is a piece of open cutting at the end, and I remember very well measuring with the tape from the junction with the main tunnel up to the Government Guard House wall; that was a certain length—I forget the figures—and I remember writing in my book when I came there—"See section." And, in looking at the section, in which the numbers are all marked from the main tunnel end up the street, I remember putting that down in my certificate, and I never thought of deducting the open cutting at the other end, seventy-five odd feet. I remember finding out that error.
100. Can you understand how an error of an equally serious character could be made in the brickwork? We could make an error in the same way. I know an error was made in several instances from mistaking the lineal length in the first place. The usual way of measuring brickwork was to take the lineal length and then multiply according to the area of the sewer and the thickness of the brickwork—nine or fourteen inch—so many cubic feet to the foot run. By multiplying the number of cubic feet, you have the number of rods done. If you make a mistake in the lineal length, or multiply by a different multiple, of course the whole calculation is wrong. There are two ways of measuring brickwork—by the lineal rod and by the rod of three hundred and six cubic feet, or two hundred and seventy-two cubic feet; and different multiples give different results.
101. I understood you to say that in the sections the thickness of the brickwork was drawn or written in general? Yes.
102. I also understood you to say that you always examined, either sooner or later, at some time during the progress of the work, the brickwork yourself? Yes; I might walk along the street and go down the first shaft that struck me and look at the face. I could not go through it because the centres were in. Repeatedly I have had pieces taken out and the cement as well altered. There was great complaint about the cement, and we had a great deal of trouble to get the men to mix it properly, and also taking out the red bricks, which were packed behind the sewers.
103. You were in the habit of doing this from time to time? Constantly. I was not at the various shafts every day; it was impossible I could do it. My duties were very arduous, in many cases, because I had not only to see to that, but to see that the levels were correct; for although we were not actually responsible for the inclination of the sewers being made right—the contractor was entirely responsible for that, and if it was wrong he must have ripped it up and put it in right—still it was my duty to see that it was set out right from time to time; in fact, I have personally set out all these junctions and superintended them; indeed, I did not leave it till I saw the three rings of the invert laid in, for I laid down the curves myself, and was very anxious to see how they would come in.
104. With the thickness of the brickwork written on these sections, and with your repeated examinations of the brickwork in the course of its progress, and at the time of measuring, can you explain how it should have occurred that the brickwork—for instance, in Macquarie-street—which is proved to be nine inch work, is repeatedly described as fourteen inch? I have heard of it. I was much surprised, and I inquired about it, and the fact is, that there is a long piece of fourteen inch work put in the crown and not in the sides, and that the fourteen inch work is in every shaft; but there is nine inch work in the tunnels.
105. I speak of the whole length? That never was certified to be fourteen inch all through.
106. *By Mr. Plunkett*: Have you anything to refresh your memory? I have nothing. I cannot remember that it was ever certified as fourteen inch work beyond the Guard House wall, except at the shafts, which was fourteen inch, and there were a certain number of shafts of that thickness.
107. *By the Chairman*: With these precautions—the thickness of the brickwork written and drawn on the sections, and constant examinations of the work while it was in progress, and while you were measuring—can you explain how it should have occurred, that while it is proved that there have only been eighty-five rods of brickwork executed in Macquarie-street, it should have been certified, in October last year, that there were one hundred and thirty-one? I know I remember making it one hundred and thirty, and I remember making it ninety odd rods after that again.
108. Will you turn to page 141 of the evidence given before the Committee of last year

H. C. Mais, Esq. which you have before you? It is here put down as one hundred and thirty-one rods ninety-four feet.

31 Dec., 1856. 109. If you turn to that (*referring to the report of Mr. Bell*) you will see the measurement made on the 4th July last? I do not know anything at all about that.

110. If you look at your certificate of 27th September, page 138, you will find it there described as ninety-three rods, and if you pass on to the certificate of 11th October, you will find it is described as one hundred and nineteen rods, and on the 25th October, you will find it described at the top of the page as one hundred and thirty-one rods of fourteen-inch brickwork, making the whole of the brickwork in the street fourteen-inch? That is a mistake.

111. If you refer to Mr. Bell's report you will find that Mr. Bell certified, on the 4th July last, that the quantity of brickwork was eighty-five rods? I do not know how that fourteen-inch brickwork could have been put down. On the 27th September it is certified as nine-inch work. It must have been put in the wrong column. That must have been the error.

112. On the 11th October, and again on the 25th October, you will find it described as fourteen-inch work, making it one hundred and thirty-one rods? I think that must have occurred from the former certificates being ruled in columns, showing the nine-inch and fourteen-inch work separately. But it is not computed as fourteen-inch work from the amount of money.

113. One hundred and thirty-one rods of fourteen-inch work would come to the same sum as the same quantity of nine-inch work? It must have been put in the wrong column.

114. Passing on to the certificate of the 8th November, you will find there the quantity reduced to one hundred rods? Yes; I remember the day I went over that, as I thought, carefully, with Mr. Rider, because he said he thought there could not be that quantity of work.

115. Mr. Rider has explained that the reduction was made in consequence of his going over the street and correcting the errors? Yes; I remember going over that street well, and making out his result.

116. Can you explain to the Committee how this grave and serious error could have been committed by you—on the 27th September ninety-three rods, increasing to one hundred and nineteen rods on the 11th October, and to one hundred and thirty-one on the 25th October, while it turns out that the total quantity of brickwork completed in that street was eighty-five rods; and it also appears that almost all the work in that street is nine-inch, with the exception of a small portion (twenty-seven feet) about the shaft? The only way I can account for that difference in the number of rods, is by supposing there was a mistake in the calculation; I know no other reason, for I know we measured it over with the tape. I know we measured this street three times with a chain that the agent of Mr. Randle has at the present moment, and we made a mistake of one hundred. We tried the chain with one we got from Colonel Barney's office.

117. *By Mr. Pinnett:* Who do you mean by we? Mr. Parker and myself; he and I went down the street together; we chained it twice, and did not make it agree one with the other, and then we chained it a third time over the top, and made it different again.

118. *By the Chairman:* With the quantity of brickwork drawn and written on the sections, and with your periodical examinations of the work as it was going on, how is it possible this error could have occurred and been repeated? I do not understand how I could have put it in all fourteen-inch brickwork, for I knew it was not; the book shews it.

119. Here it was certified to by you, and Mr. Randle could claim to be paid ninety per cent. upon that amount? He could claim it at the time, but he could not claim it if it proved to be wrong.

120. He could claim it from fortnight to fortnight? Yes.

121. When the total amount he appears to have been entitled to was £3,500—a sum nearly £2,000 less than the sum you certified to be correct on the 25th October? I know no other reason than that I have stated; I know that error has been committed over and over again. I know no other reason than inaccuracy in taking the dimensions and squaring them out afterwards.

122. Keeping in mind that you never allowed more than a fortnight to elapse without re-measuring, can you account for this error occurring in two or three following certificates? No; it is going on from one hundred and nineteen to one hundred and thirty-one rods.

123. If you will look to page 142, you will see there that it is charged as thirty-one rods of nine-inch brickwork, and sixty-eight rods of fourteen-inch brickwork;—now Mr. Bell has stated to us, that the result of the measurement on the 4th July shows that it is nearly all nine-inch work? I know there is fourteen inch work at the shaft, and I know it is fourteen-inch from seventy-five feet from the junction up to the Guard-house wall.

124. Mr. Bell's statement is, that about the shaft it is fourteen-inch for the space of about twenty-seven feet? I know it was intended to be fourteen-inch up to the Guard-house wall.

125. If that was the intention was it not your business to have seen that it was fourteen inch, or if fourteen-inch work was not put in, to have discovered that it was nine-inch work? Yes, it was my business, and if I had seen it I should have put it in.

126. How do you account for not seeing it? I do not know. I cannot give any reason at all. I know if I had seen it, the same as I have done now, I would have altered it, and made it right, as I did find it. I made an error just the contrary way in Pitt-street, and it was never discovered until Mr. Bell came, and the street was measured again.

127. That rather tells against your own accuracy? I cannot help that. Of course it must be my mistake. I am only stating the fact.

128. Two errors would hardly relieve you from the charge of carelessness? I know that. I do not try to rid myself of any blame. If I have been careless I must acknowledge it. I can give no reason for it but carelessness.

129. You will, I presume, admit, seeing that error of £2,000 in excess, that if similar error had

- had been made, the contractor might have been paid much in excess of what he was entitled to claim? Yes.
130. I will now direct your attention to the driving in rock in the same street. You will perceive that you certified on the 25th of October to 2,903 feet of driving in rock? Yes.
131. If you turn to Mr. Bell's certificate of the 4th of July, you will there find that the quantity of tunnelling in rock certified to, is 2,545 lineal feet—upwards of 350 feet less than you certified for on the 25th of October? That cannot be 2,903 feet; it must be a mistake, because I remember that that is the length of the street from the junction with the main sewer to King-street. I remember the length, but there is a piece of open cutting, seventy-nine feet in length, I think, at the bottom of the street, which must have been included.
132. You will observe that Mr. Bell certifies to 252 lineal feet tunnelling in soil. You perceive that 2,903 feet appears in the certificates of the 13th of September, the 27th of September, the 11th of October, and the 25th of October? Yes; the quantity has been repeated, carried from certificate to certificate.
133. It appears to be reduced in the certificate of the 8th November to 2,727 feet? What I put down I believed to be right at the time. I do not see how I can reconcile it.
134. There is the fact, that you certified to what turns out to be an excess in the length, and, according to Mr. Bell, an error in the character of the ground? 2,903 feet is an excess in length; that is, the total length of the street, and, therefore, it could not be the total length of the tunnelling, because a piece of open cutting was omitted to be deducted, which, I think, is 79 feet; and, besides that, there was a certain dip beyond that open cutting, which makes forty odd feet more.
135. Keeping in mind your statement, that although you might have allowed one fortnight to have elapsed without remeasuring the whole length, you do not think more than one could have elapsed; how do you account for the repetition of this error? From the circumstance of 2,903 feet being repeated, I am certain that it never had been measured between these certificates, because the street was completed.
136. It does not appear that the brickwork and other works were completed, for there are variations in the quantities, which indicate that you must have gone over them, to see how the work progressed? Yes, but the driving was done first.
137. Yes; but still you must have measured the other work as it progressed? Yes.
138. There is just another item to which I would call your attention. In the certificate of the 25th of October there are 480 junctions in the same street, amounting to £312? That is impossible.
139. It appears in fact, that there were no junctions, but that 56 collars were executed, up to the 4th of July last. You will find that that number is repeated on the 8th of November, but that the junctions are charged at a different price; in the first instance the price being 13s., and in the second 7s.? Yes. The 480 must be an error, because there could not be that number in the length of the street.
140. How can you account for an error of that kind appearing in your certificate, and being repeated? I have been trying to find that out. I saw a notice of that in the papers, and I went to the office to examine my books, to see how it had occurred. I see there are 480 lineal feet in one of my books, whether that was put down as junctions I cannot say; I think it was 484 feet.
141. There is another item to which I will direct your attention;—there are 17,220 feet rendering certified for by you, on the 25th of October, while in Mr. Bell's certificate of 4th July, there are only 10,444 feet? The difference in the brickwork would make the difference in the rendering, for the one is calculated from the other; if there be a difference in the length of the brickwork the rendering will alter in proportion.
142. Still the rendering would be in proportion to the length; it would not be affected by the difference in the thickness? No, not at all by the thickness; from the length you would find the quantity.
143. Will you add up the total sum, as certified to by you, for Macquarie-street, on the 25th October—is it not £18,703 15s.? Yes.
144. If you turn to Mr. Bell's certificate for the same street, on the 4th of July, you will find that it is only £15,061 13s. 5d.? Yes.
145. Shewing an excess in that one street, arising from these various errors, of £3,642 1s. 7d.? Yes. The great error is in the brickwork; that is where the error is.
146. That is the great error, but still, deducting that, a sum of £1,600 or £1,700 is left to be accounted for? Yes. Why the error should be made in this one street I do not know I am sure.
147. Is there anything you wish to state in reference to these several errors in Macquarie-street? All I know is that these errors in Macquarie-street, or in any other street, must have been through carelessness; I see no other reason for mistaking figures, or making wrong calculations. I do not know any other way. I see I made here in the last certificate 2,727 feet driving in rock, and Mr. Bell makes it 2,545. I do not know how it could have occurred, for I have been present at two quarterly measurements—the December and March measurements—and I do not think there was any difference.
148. There has been some reduction made since March—? I dare say there has, but I had nothing to do with that. I was present at the measurements, up to the March certificates. I do not know the reason of these errors, but I only know that when they were discovered I altered them. I found them out myself, and corrected them as well as I could. I know we carefully went over them at the December quarterly measurement; it was terribly hard work and we were employed upon it the whole of Christmas last. We went through the whole of the sewers; Mr. Randle was present, and Mr. Storey, Mr. Rider, myself, Mr. Parker, Mr. Orford, and Mr. Hooper. There were an equal number on both sides; two measuring at the  
bottom,

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- H. C. Mais, Esq.  
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- bottom, and two at the top, and, as we believed, we made a correct measurement. I was satisfied when it was done that the measurement was a correct one.
149. That was the December measurement? That was the January measurement for December. I was satisfied with it because it took the whole responsibility off my own mind, as I felt sure that if there had been any error it would have been discovered.
150. I will now call your attention to Pitt-street. You will find that on the 27th September there were 3,577 lineal feet of driving in rock certified to, involving a charge of £16,096 10s.? Yes.
151. If you turn to the 11th of October, you will find 3,135 lineal feet of driving, at a charge of £14,107 10s.? Yes.
152. Being a reduction of nearly £2,000 in the fortnight? Yes.
153. Then, passing on to the 25th October, it comes down to 3,076 feet driving in rock, at a charge of £13,842 in the same street? You must add all these items together. I see that, on the 25th of October, it is 3,140 lineal feet driving in rock in Pitt-street, and in the next certificate it is 3,161 feet.
154. If you turn to the 27th of September, you will find that it is 3,577 feet, involving a charge of £16,096 10s., but according to Mr. Bell's statement on the 4th of July, there were only 2,790 feet? I measured it with him twice, but we could not make our measurements agree. I think that street has been measured nine or ten times.
155. How do you account for your own error of 27th September, involving so large an amount of money? I do not know the reason of it; I cannot account for it. All I know is that in the December measurement I believed all was corrected up to that date, but whether that agrees with Mr. Bell's measurement I do not know for I have never seen that. I know that at the end of the quarter—that is at the measurement made on the 31st December—all the measurements were corrected.
156. How could you have accounted for so gross an error? I do not know, for I brought it back again, and then I did not make it agree with the measurement I had made before.
157. With these grave and serious errors which I have pointed out to you in Macquarie-street, and with this further error in Pitt-street, of what possible value could these certificates have been to the Commissioners with regard to their fortnightly payments? They were not supposed to come from me certified as certificates; of course, the City Engineer was the more responsible officer, and it was his duty to check me; but I was the only person who had to do the whole of the work, I had to measure the work and make the calculations all in eleven hours.
158. Practically, the Commissioners paid upon your certificates? No; they would not pay on my certificates, for I remember that Mr. Rider was absent one Friday, and did not therefore sign the certificate, and the Commissioners refused to pay. I had no right in the world to put my hand to any certificate, and I am only sorry I ever did.
159. Mr. Rider has said that he was not bound to test the correctness of your certificates, but that he took them as guarantees that the work was correct, and always signed them as a matter of course? They were the first I ever signed and they will be the last; it was not my duty to sign them. Not that I wish to free myself from any blame in the world for any carelessness. If any errors have been committed, they are errors, I freely admit, done from carelessness; when they were discovered, I always corrected them. How these last errors were discovered, or whether they are errors, I could not tell, unless from a fresh measurement of the ground. What I should like to find out is the difference between the measurement that we all considered to be correct, and that which Mr. Bell now considers correct. I should like to find out whether the measurements of the 31st December and the 31st March, which was the time I ceased to be connected with the City sewerage and went to the City water works, corresponds with the one now certified to by Mr. Bell.
160. Your immediate responsibility is connected with the fortnightly measurements, for the quarterly measurements were made, not so much by you as by the Chief Engineer? All the Engineers were present at the quarterly measurements.
161. These quarterly measurements were intended as a check upon your measurements throughout the preceding three months, and you would be less responsible for them than for the fortnightly? Yes; it was intended to be a check in case there would be any error, and therefore before the contractor could be paid, he had to send in a bill at the end of the quarter, and if his bill did not correspond with the measurements he would be paid only according to the measurement.
162. As a matter of fact, the Commissioners paid upon this certificate? Not always. They never paid a certificate in full; sometimes they kept back a large amount; I know that, for I had a copy of all their payments, which I made for my own information. I know they seldom paid up a full certificate, and that they never struck a balance.—They might have done so the first or second time, but not after that; they paid on account, so much in debentures, so much in money.
163. I suppose you are not prepared to deny that these certificates were not reliable for the purpose of making payments upon them? I do not deny anything I have done; I admit that there are errors and serious errors, beyond that I can say no more. I cannot account for them, as I said before, any more than that I might have been careless in taking the measurements; but I do not know why I should have been. I can only say that there was a great deal of work to be done—to take the measurements, make the calculations, and put them into a certificate, between eleven o'clock one day and the same time of the next. You will find that is so if you go into the calculations. I am not surprised myself that I made mistakes considering the work I had to do.
164. Do you not think it would have been your proper course, if you found you had more work than you could do, to have declared at once that you could not do the work faithfully and satisfactorily, without further assistance? I made that representation to Mr. Rider, that I wanted more assistance and supervision; I spoke to him repeatedly about it, and I got it at last, but not until about December.

165. *By Mr. Plunkett*: When did you make that representation? I think in November or December, but I do not remember exactly.
166. When did you first make any representation of the kind? I think at the outset of all, I thought it would be better to have a clerk of works, and I mentioned the circumstance to him. I also made a representation to him to have some assistance in the streets to check the levels, and setting out so as to take the duty off me, because I levelled the whole of the main sewer, and made the sections myself, which I ought not to have done. After a time we had a man put on for this work, an assistant draughtsman in the office; and even when the levels were done by him they all turned out wrong.
167. *By the Chairman*: With regard to the excavation, how did you ascertain the character of the ground, whether it were rock, soil, or mixed? Only by inspection, and by seeing the men at work.
168. You examined it? I did. I know the general character of the whole ground throughout. I believe there is not a foot of the sewer that I have not been through.
169. You were not satisfied to remain above ground, and to take the information as to the work from those who went below? No. I know the ground to my cost, I have worn out too many clothes there. I know the whole sewer all the way through, from one end to the other.
170. In reference to the charges for rock and soil, did you determine them upon your own judgment, or did you consult with Mr. Randle's agent, or with Mr. Rider? Not with Mr. Randle's agent, but with Mr. Rider, and what we agreed to was put down. In Elizabeth-street, I think, we had one dispute about that. The contractor's agent was present when I was measuring the open cutting and driving at the other end up by Bathurst-street, when it was called out so many feet. I said "This is half and half." He said "No, that will not do." I said that was to be so, and I certified to that, and it continued to be charged so many cubic yards in soil and rock. In Pitt-street we did not agree, because I did consider that it was—and I am not yet convinced that it was not—rock, although it was afterwards agreed upon by the Commissioners and Mr. Randle to have it charged as two-thirds rock and one-third soil.
171. That is the compromise to which you now refer? Yes.
172. Then it was your duty to determine upon the proper charge? The proper charge was determined by the schedule of prices.
173. As to the character of the soil, whether it should be charged as rock or soil, did you consult with Mr. Rider? No. I went by my own judgment in general, but if there were any doubt I referred to him. It was so with regard to Elizabeth-street. When I said that was only half soil and half rock he went and looked at the street and agreed with me.
174. Was he in the habit of examining the ground after seeing your certificate as to the nature of the soil? Not always.
175. He accepted your judgment as generally final? I cannot say that he did that; for instance, in that very case in Pitt-street there was a great discussion over that,—it lasted some two days; and even after the labours of the Committee which sat last year, I was not convinced even then that my certificate was incorrect. They all went down together to examine it, and it was agreed upon that it was best to compromise the matter, by making it two-thirds rock and one-third soil.
176. You speak now of the portion of Pitt-street towards the southern end, which was originally charged all rock? Yes; I believe it was submitted to the Commissioners, and I believe they declined to pay for it. The certificate was then altered over and over again, and I had to copy it four or five times. The Commissioners were of opinion that the certificate for Pitt-street at the upper end ought not to have been for rock. Then it was proposed that they should examine it; and they went down personally and examined it. The result—what they did—I do not know. Mr. Rider, Mr. Randle, and all met together, at the Commissioners' Office; the matter was gone into, and it was settled that it should be charged two-thirds rock and one-third soil; I believe that is the way it was settled.
177. Is there any statement you wish to make to the Committee in reference to the measurements, or the particular duties you had to perform in connexion with the sewers? No; only that I am sorry I had not more supervision of the work, and more assistance to check me; if I had got that—and I dare say if I had urged it more I might have got it—but it was a long time before I got it; and it generally is so in all offices. Now the thing is going on in quite a different style. I will not say how many Assistants there are now, but I believe five or six; so that it is very hard if they do not get it right between them. There cannot be much mistake now. I do not profess to be much of an accountant, and I made many mistakes in the money, in running out the amounts—so many feet so much money—but it is not my business to carry out the money at all. I often made these mistakes in the money. I admit all these things, because I know I have done them, and feel I have done them; but I have done them from, I presume, being careless. When I had made an error, and found that I had done so, which I believe I almost always have done, I corrected it to the best of my ability.
178. Mr. Rider states that the measurement which he made between the 23rd and 27th of October was made with the view of checking the errors which he had reason to believe existed in your measurements, and that these corrections on the 8th of November are the result of his more careful examination at this time? I will not dispute it, but I never heard that before. I am not aware of Mr. Rider ever having spoken to me of any error in any way. When I found out any error I submitted it to him.
179. He attributes the correction of the errors in Macquarie-street, in his certificate of the 8th November, to the more careful examination he made, with the assistance of Mr. Hooper, between the 23rd and 27th October? No. Mr. Rider, Mr. Hooper, and, I think, Mr. Cowlshaw, had to measure the work for the September quarter; there was no September quarterly measurement really made, but there was to have been one. Mr. Rider was directed by the Commissioners to make the measurement personally, and to employ Mr. Hooper to help him.

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- I think it was that which took place between the 23rd and 27th October, and that it was not made in consequence of his having seen or discovered any error I might have made. I remember his having instructions to go round and measure the work. Mr. Rider never showed me any error in the measurement, because he could not have done so without going through the whole of the calculations, and if he had done that, it is a hundred to one if there had ever been any error. When one man goes over another's work for the purpose of checking it, he is pretty sure to find out any mistake. I am pretty certain that Mr. Rider was not in a position to find out any error until the quarterly measurement was made, because he had no data to go upon.
180. You do not mean to deny that the corrections which appear in Macquarie-street in the certificate of the 8th November are in some measure attributable to the more careful character of the measurement made by Mr. Rider, between the 23rd and 27th October? I can conscientiously state that I never saw Mr. Rider's or Mr. Hooper's measurements; they were never booked; they never went into form, and could not, I think, have been submitted to the Commissioners.
181. Then your corrections are the results of your own more careful measurements? I am perfectly sure of it. I never saw his measurement—I might have seen it on his desk, but I never went through it—I never compared items with it; I did compare with the December measurement.
182. *By Mr. Oxley:* You say that Mr. Rider was not in a position to check his measurements? I made that remark because he had not the actual quantities already worked out; and he could not do it unless he chose to go through the whole work; he had his own measurement-book, but he was only occasionally present at the measurements.
183. Could he not, from his own plan, have checked the measurements? No; he could not, unless he had taken my measurement-book and written my lineal length on the plan; he might have checked it in that way, but that was never done until I did it myself. I did that on the main tunnel. I used to color in the number of lineal feet of work done as it progressed.
184. Was not that done as a matter of course from the commencement? No; I did it myself towards the latter end, but not from the first; in fact, I wished to make a progress section—as they do on the railways at home to send from time to time to the directors of the companies—to get out the whole of the sewers, and as the quarterly measurements were made to color it in red, blue, or green.
185. *By the Chairman:* Such a section as Mr. Ball has now? I have no doubt.
186. *By Mr. Oxley:* Did not Mr. Rider keep any progress section? No progress section was kept to my knowledge.
187. He never, so far as you are aware, copied off your fortnightly measurements on to a plan of the sewers? No; to the best of my belief he did not.
188. Supposing you had chosen to have resigned at once, and had left the measurement book in his hands, he would not have known where you had finished up to? I think he could from the measurement-book.
189. Without going into the street—he could not do it from the plans? No; he could not without going into the street and checking it himself; in fact, I was half inclined to resign myself in September, and I wish I had.
190. Do you not, as an Engineer, think that is the proper and only way of carrying out a work of this nature? No doubt it is the proper way; I mentioned from the first that we ought to have a progress section.
191. Were you ever connected with any works where there was not a progress section? No.
192. Works of any kind? Not of that sort of work, unless it were a very small job.
193. Was it your duty as resident or assistant Engineer——? I was Assistant Engineer.
194. As Assistant Engineer to see this progress section carried on? No; I did not consider it my duty. There were two levellers and draughtsmen in the office; they were engaged to level the streets, to check the sections. It occupied me pretty well to do what I had to do; I made the levels of the different streets, the drawings of the different junctions; I had, also, to make the drawings of the cast iron work myself, among other things, of a weigh-bridge for the Haymarket.
195. Then you, as Assistant Engineer, did not hold yourself responsible for this looseness in the performance of the office business? No, I had nothing at all to do with it; I had no power in the office over any body. I was not a responsible officer there at all. I could certainly tell the draughtsmen that I wanted such or such a drawing done, and no doubt they might do it, and would do it, but they were not placed under my charge.
196. I think you said, in one part of your evidence, that you made mistakes not only in the measurements but in the moneying? Yes.
197. Was it your duty, as Assistant Engineer, to do the money part at all? I should think not; I never did it before.
198. By your engagement did you consider that you ought to be a clerk of accounts? No; all I had to do was to put down a price for the work according to the schedule, and not to carry out the amount to the money column; however, I was told to do it, and I did it.
199. You moneyed out all the works? Yes; I think I moneyed out all up to a certain date, when there was some idea that it would be much better to have it checked by a clerk, and then the chief clerk in the Water Works, Mr. Wilson, checked over the money items.
200. *By Mr. Plunkett:* When was this change made? Last year. Mr. Wilson was the gentleman who went over the account.
201. *By the Chairman:* Your rule was not only to give the quantity of work, but to money it out? Yes.
202. *By Mr. Oxley:* How did Mr. Rider employ his time, if he did not go over the ground at the time of measurement, if he did not check your measurements, and if he did not money out the work? Sometimes he was on the ground with his book; he used to be there; he was not always with us measuring, but occasionally.
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203. When you brought your fortnightly measurements to Mr. Rider, did he merely sign them as a matter of course, and pass them? He has done so.
204. He never referred to his plan to see whether you were correct? He has on one or two occasions; but I think the certificates were generally signed, as he said to the Committee, on the faith of my signature.
205. When you went up to the office in the morning with this certificate, were you not in the habit of referring to the plan with your chief? No, I think not, excepting on one or two occasions, to ascertain the length of some shaft in the main section. That was after I had begun this progress section. I said the work would be done in so many weeks; he said it was impossible; and I went up to this section to see how much it would be.
206. *By Mr. Long:* When you were performing these works in Macquarie street, there were shafts sunk at different distances, and you drove from these shafts—when you measured at these fortnightly measurements, did you go down each of these and measure from the shafts? Yes, I generally went down the shafts, but I did not on all occasions; when I went down I stood in the centre of the shaft holding one end of the tape, while one of the men took the other end and went up the tunnel to the right, and called out the length in that direction; he then came back and measured in the other direction; he called out so many feet north and so many feet south. I think my measurement book is made out in that way.
207. Was there no more than one chain, or one tape's length from the shaft to the point at which the work had been executed? No, not till the tunnel was through.
208. Were the shafts so near each other that the distance would not exceed the length of the tape? If the length were greater than my tape, I would have to go in from the shaft to the point to which the tape extended, and the man at the other end would make a crow's foot in the tunnel, and go on to the end.
209. What check had you that the man did not deceive you? I had no check at all; I had as much faith in him as I could put in another man, and I could not be at both ends at the same time.
210. Did you commence each time from the shaft, or did you leave a mark to shew up to what point you had measured? Sometimes I left a mark or crow's foot on the side; if I did not, of course I had to measure it all over again. But the measurements were taken, not so much from marks as from the number of the shafts; all the shafts were numbered.
211. Have you invariably held one end of the tape in measuring Macquarie-street? I think so; sometimes I did, sometimes I did not, for it is awkward to hold a candle, the end of a tape, and a measuring book in your hand. In measuring a long length in a tunnel you cannot see without a candle; the party at the farther end of the tape made a crow's foot on the side to shew how far the tape extended, so that when the other came to it he might know where to start from.
212. *By Mr. Plunkett:* Did you know Mr. Rider before you came to this Colony? No.
213. When did you become acquainted with him? I never knew him till I went to the office. When I came from the country, where I had been engaged putting up a saw-mill, as I was out of work I went to the City Commissioners' Office, and was introduced to Mr. Rider. I submitted my testimonials to him, and he said he would lay them before the Commissioners.
214. He was then City Engineer? Yes; that was in January, or February, 1855. I called upon him a day or two after my first interview, and he gave me to understand that I should be engaged if I went on the following day.
215. Were all your testimonials laid before the Commissioners? Yes.
216. Was it upon the recommendation of Mr. Rider that you were appointed? I do not know; I received my appointment through Mr. Rider; I did not get my written appointment until 16th August, six months afterwards.
217. Did you act before you got your appointment? Yes. I had a written appointment afterwards.
218. Were your duties defined by the City Engineer? I had no particular duties defined; at first I assisted in getting up drawings.
219. Did you get a letter from the Commissioners intimating that you would be employed? No.
220. How were you paid? I was not on the staff—I was paid monthly.
221. At what rate? At the rate of £300 a year.
222. What was the cause of the delay in getting your Commission? I do not know that there was any reason for it; I was not even given to understand that it was a temporary appointment.
223. Were you acting for six months as Assistant Engineer before you received your appointment? Yes. I wrote requesting to be placed on the permanent staff; twice I wrote to Mr. Rider, but he took no notice of my communication, and I then wrote to the Commissioners. The answer I received was, that I was placed on the staff.
224. What were your particular duties? I was then employed chiefly in preparing drawings for machinery for pumping at the water works.
225. Were you ever employed upon sewerage works before you came to this Colony? I was not employed upon them, but I have been present at them in Bristol and also in London.
226. What opportunities had you of becoming acquainted with them in Bristol? Merely from coming in contact with professional men engaged upon them. In fact I knew the Engineer personally—he was a particular friend of mine.
227. You were never actually engaged on sewerage works yourself? No.
228. What were your particular duties as Assistant Engineer? To measure the work, to prepare any working drawings that might be required for the works, to make out these certificates and to send them in.
229. What works do you particularly refer to? The sewerage works. I was originally engaged on the water, and the gentleman now engaged on the water works was then employed on the sewerage.

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230. When you were placed on the sewerage works, did you get any instructions—were your duties defined? I had no instructions.

231. *By the Chairman:* You mean no written instructions? No written instructions. My chief duty at that time—it was the time of the great flood in Sydney—was to run about to see after the old sewers.

232. *By Mr. Plunkett:* I understood you to say that you never saw a work of this kind commenced without drawings, plans and sections? No work of any kind is commenced without drawings, plans and sections—I referred to a progress section.

233. When you saw that omission in this work, did you make any observation about it? I did, to Mr. Rider, to the effect that he ought to have a progress section.

234. When was that? At the commencement, when there were some few feet driven in the main tunnel.

235. What was the consequence of that? It was not done at all.

236. Was it not your business as much as his, you being Assistant Engineer, to see that that was provided? I could not do it myself, for I had as much to do as I could attend to; but I caused another set of sections to be prepared, to correspond with the original sections, and I converted them into progress sections.

237. When did you begin to color your progress sections? About September or October.

238. Was it before or after you were examined before the last Committee? I think they were shewn before the Committee. I think some were colored.

239. Are they forthcoming? They are in the office; I am not sure whether I have not written the dates upon them.

240. You have stated that your measurement book is in the office? Yes.

241. Is that the book you refused to produce to the Committee last year? Yes.

242. Is it written in pencil or ink? In ink. I must explain a little with reference to that book. There was a copy of that in the office; it was my private property; I bought the book and kept it in my pocket, and it was copied by myself into another book in the office and checked with it. Mr. Rider had it in his possession in his desk. In fact it would puzzle a good many to understand it. I gave the book to the Commissioners.

243. How were the quarterly measurements made? They were made on the same principle as the fortnightly ones, only there were more people to check them. There were more eyes to see what was done, and we did not trust to the workmen to take the ends of the tape.

244. Who took the tape on those occasions? I think the Clerk of Works took one end of the tape, and Mr. Hooper the other. I think I have also taken one end of the tape, and Mr. Randle or Mr. Rider the other.

245. How do you account for these errors not being discovered by these quarterly measurements? That is, how they were discovered after the 31st of December.

246. There were some errors discovered, but not to the full extent? There was no quarterly measurement to discover the errors till the 31st December. The other was not a quarterly measurement; it was made in November, but it never was finished. I do not believe that it ever was brought to book, that is, carried out in form and brought before the Commissioners.

247. What was the use of making it then? I cannot say, but I do not think it was ever finished.

248. Was that the first? Yes; there ought to have been a September one, but it was omitted; and the first quarterly measurement actually gone into was in December, 1855. There was another made in March, during the time I was there.

249. You say the payments were marked on your certificates; what opportunities had you of seeing that? Not on my certificate, on the certificate book. I wrote ten per cent. off, leaving the balance due. My rough certificate was copied into the certificate book, and just below the balance the secretary wrote the amount the contractor had received on account, and if he was not paid the full amount what he really did get. That was the means I had of knowing, and I kept a rough memorandum of these little items in my own memorandum book; I kept it more for my own satisfaction than for any thing else.

250. You did not consider it your duty to make out the money calculation? No.

251. Why did you do it? Because I was requested.

252. Who requested you? Mr. Rider.

253. When did he first request you to do it? When the first certificate was made; he said, "Money it out," and I did so.

254. Did you remonstrate with him upon the subject? I think I said, "You ought to have a clerk." I do not know whether I said so at that time.

255. Did you ever complain to the Commissioners? No; I think I complained once or twice to the clerk.

256. Did you ever tell the Commissioners you were not a good accountant? No.

257. Was there any one to check that account? No.

258. There was no mode of checking either your measurements or money calculations? Not until the latter end of the year, when Mr. Wilson, the chief clerk, had the duty.

259. I wish you would tax your memory and say when he first performed that duty? I think about November or December.

260. You were examined before the Committee on the 4th October? I will not be positive, but I think he did before then. I can answer that by referring, because the certificates checked by him would be initialed; unless I saw the certificates I could not tell.

261. You say you never saw the measurement of Mr. Rider? Not the September quarterly measurement.

262. When did you first see his measurements? I never saw any measurement of his till December; that is to say I never saw a certificate of his till then.

263. You say you always corrected the errors yourself? Yes.

264. What turned your attention to the circumstance? Nothing at all but going to it again.



265. Did you not get a hint on your examination before the Select Committee? It made me sharper certainly; it made me look more into the thing. Still I made an error, although I was very careful.
266. I suppose you are not ignorant of the fact that Mr. Rider did make an examination in October? I know it; I have seen it, that is as much as I see the paper now before you, but I did not see it to read it.
267. Did you not speak to him about it? No.
268. Nor did he speak to you? We never had any conversation about it.
269. He never gave you any intimation about the errors discovered in your certificates? Yes, about Pitt-street.
270. When was that? About October or November; at the time he was making the certificates out, he drew my attention to it, and said "How is this? I do not make it so much as you, nor does Mr. Hooper, but we will measure it again;" and I believe they did so. But I believe that certificate was never completed; I am convinced it never was; I never saw it, and I do not believe the Commissioners ever did.
271. Was there any reason that the Engineer did not communicate the result of his measurement to you as the Assistant Engineer, upon whom he relied up to this time? I do not believe it was completed so as to come to any definite conclusion.
272. Was there any reason for not completing it, particularly when there was so much noise made about it? I cannot say whether it was completed or not; I never saw it.
273. Looking over the thing, with the utmost consideration, how do you account for returning, by your certificate, 131 rods of brickwork when it turns out that there are 47 rods less now in existence? The only way I can account for it, and I have often thought the matter over, but have no record to which I can refer,—the only way it could have occurred must have been from making a mistake in the length of the street, and then from that making a wrong calculation; for if you make a mistake in the length you must be wrong in the number of rods, for the length must be multiplied to give you the rods.
274. On the 27th of September you state that it is nine inch brickwork, but it is afterwards carried out as fourteen inch—what is this sum of £42 in the certificate? That is for the rod; the price remains the same whether it is nine inch or fourteen inch.
275. In every certificate, except this of the 27th of September, the brickwork is down as fourteen inch? Yes; the fact of its being priced after as fourteen inch, would make no difference in the calculation, because the price would be the same. The only way I can account for it is that it was a wrong measurement.
276. Was that one of the errors you discovered yourself? Yes; I discovered the error about the rods of brickwork; I remember the 2,903 feet very well.
277. If you had even measured over the surface, would you not easily have discovered that if there were only 85 rods of brickwork that you must have been wrong when you returned 131 rods? No, it would not strike me in that way; but it would strike me in this way:—2,903 feet is shewn on the section as the length of the street from the junction with the main sewer up to King-street, and it would strike me, from reference to that, that there could not be that length of tunnelling, whether it was from inadvertence or hurry, I put down 2,903 feet of driving, forgetting that it was not quite complete to the main tunnel, and also that there was a certain length of open cutting.
278. When you discovered the error, and others discovered the error, how was it you did not correct it? I think I did.
279. Your correction was not accurate—when you made it at all, why not make it accurate? I fancied I did.
280. Are you now satisfied that it was not? From what Mr. Bell states here it appears to be altogether wrong, fearfully wrong. Nothing but measuring it again would convince me I was wrong, for I measured that street so many times, I think five times myself.
281. I wish you could show the Committee that Mr. Bell was in error? I do not wish to do so.
282. When you found you had made an error, still that error was not corrected accurately, I would like to know how that could have occurred? It has been rectified; I repeated 2,903 feet driving in rock.
283. Will you stick to the measurement of the brickwork? The error in the one is the cause of the error in the other; if the running length be wrong that will make the other wrong.
284. You are aware that this error made a difference to the revenue of the public of several thousands of pounds? It would do so, of course; I see it now very easily; but what made me not very particular was, that I knew these were only payments on account, and that the quarterly measurements would be checked.
285. You have said that you first discovered the error yourself, and that though there was a quarterly measurement gone through, it was not completed? That was the first measurement; I never saw it as completed. I believe the Commissioners gave instructions to Mr. Rider to proceed with Mr. Hooper to make a measurement personally, and to write them in his book. These were the instructions I believe that were carried out.
286. When you found that the quarterly measurement was not completed, and discovered this error, did you not think it due to your own character to have the error rectified? We did, in December.
287. You say that in October you discovered this error, and the inquiry was going on in the Council at that time—how are you employed now? I am in private business for myself; I am in partnership with another gentleman as a mechanical engineer.
288. When did you first become acquainted with Mr. Randle? Not until the day when the first sod was turned for the sewers at Fort Macquarie; never until that day.
289. On what occasions did Mr. Rider assist in the measurement of the sewers at all? I can hardly say on what occasions; perhaps he would miss a fortnight; he would come

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- H. C. Mais, Esq. once now and again; he was generally about the streets when the measurement was going on; perhaps he would be in the street where the measuring was going on, and would then go into another, and return again.
- 31 Dec., 1856. 290. I wish you to describe what was your day's business, from the time of the commencement of the sewers, as Assistant Engineer, and what was Mr. Rider's? I cannot tell you what was Mr. Rider's; I can describe my own. I had to be at the office at nine o'clock in the morning to learn if there were any instructions for me, because of course in the office of the City Engineer there must be many other matters to attend to besides the sewerage. If there were any letters to answer, or if any parties were to be seen about any matter, I had to attend to it; sometimes Mr. Rider would say he would attend to it, if he did not, I did. After looking through the office to see the drawings I would go to the sewers; perhaps the men might be working in all the streets; some were driving in rock, and I had to look at the stuff they were getting out.
291. Did you always go below to see the tunnel? Not down every place every day.
292. On whom did you then rely for the proper execution of the work? I could not do it; it would be practically impossible.
293. On whom did you rely? I could not rely on any one, unless Mr. Rider went himself. I have seen him about, but I could not guarantee that he has been about like myself.
294. Was it by accident that Mr. Rider used to come? Not by accident. It used to be our general rule to commence measuring at the far end of the sewer, at Fort Macquarie, and to measure up towards Sydney, and he would say he would meet us, as Mr. Randle's Office never opened until ten o'clock, and Mr. Randle's agent used to meet us at half-past ten.
295. Was Mr. Randle's agent always at the measurement? Yes, that is usually; either the contractor must be present himself, or have some representative.
296. Was Mr. Rider always present? Not always. No; sometimes he would say he would meet us, and sometimes we met him in the Domain, or in one of the streets. Sometimes we might not see him during the day.
297. How often on these occasions did he attend the measurement at Macquarie-street? I can hardly say; on the average, perhaps every other measurement; sometimes he would miss a fortnight.
298. Was there any general rule as to his assisting at the measurement? Not at all; I cannot say when he did it.
299. Did you make any more special report to him about the measurement than you did when he was present? No.
300. Then he had no check whatever upon your measurement? No, unless he chose to make the measurement himself, or to take my measurement and take out the quantities.
301. Did he ever do that? No; I wish he had; if that had been done I think there would have been no mistake.
302. Did you make any memorandum in your measurement book whether Mr. Rider had assisted in the measurement? Yes; I think you will find at the top of each measurement the parties who were present. I think I made that memorandum in almost every instance.
303. Is that in pencil or ink? I think in ink—or pencil; some are in pencil.
304. That is the book you have referred to? Yes; that is in the possession of the Commissioner. I think you will find in most cases, at the head of each measurement, the names of the parties who were present—I know that is the case in the quarterly measurements.
305. What salary did you get from the Commissioners? £300 a year up to—
306. Any other perquisites? No, except I chose to work over hours. I had drawings to make, and I worked over-time at them, and then I was paid, not otherwise.
307. Is there any understanding that you get any perquisites from any person but your employers? Certainly not. I considered myself as much in the Government service as any one, and in that service you must be content with your salary; if you perform extra services there are certain payments, according to the work.
308. Did you perform any extra services? Yes.
309. What services? I made some drawings of weigh-bridges for the Haymarket, and of cast iron gratings for the sewerage. These were made in my own hours, and a great many in my own house.
310. For the Commissioners? For the Commissioners.
311. Were you able to earn anything from any other parties? I could if I had chosen; my time was my own.
312. I ask you as to the fact? I have done so.
313. Who are the parties? I have done work for several people; I made a lot of drawings for Mr. Holland and Mr. Gibbons.
314. Who are they? Mr. Gibbons is Mr. Randle's Agent.
315. How were you paid for these? I was paid according to the work.
316. How much? I was paid what I chose to charge; so much for each drawing.
317. How much did it amount to? I remember I think, I made him eight or ten drawings; and I remember once having six guineas for one set of drawings.
318. Could you say how much you got altogether in that way? With what I did privately, and extra services, I perhaps might have made £100 during the year; that was about the outside.
319. Were Mr. Holland and Mr. Gibbons in Mr. Randle's employment? Yes.
320. Were those drawings you made for their own private advantage, or for Mr. Randle's? They were for the railway; they were some drawings that were to be made for the extension of the line to Liverpool.
321. Why did you not deal directly with Mr. Randle? I was not in contact with him at all.
322. Did you ever speak to him about these drawings? No, I never had any conversation with him at all about them.
323. Was it their own money, or money paid to them by Mr. Randle, that they paid to you? It

It must have been their own money; for they had the job to do for him; but I got this work from them.

324. How were they employed? Mr. Gibbons was his Agent; he had the work to do. I asked him for work and he gave me this.

325. Had you any other transaction with Mr. Randle? I had no transaction with Mr. Randle whatever.

326. *By Mr. Lang:* Was the £100 which you say you made in the year, what you received from Mr. Holland and Mr. Gibbons, or what you received altogether? That was for my extra services as well. In fact when I sent in my last claim to the Commissioners for extra services, they said they would not allow me any more; and they then gave me an addition to my salary of £100 a year for extra services; so they paid me at the rate of £400.

327. *By Mr. Plunkett:* Could you recollect so much as to state, with accuracy, how much you received from Mr. Holland and Mr. Gibbons? I cannot now, but I could append it to my evidence; that is all I remember—a set of tracings.

328. Did you do any business for the contractor as well as for the Commissioners? No, I could not do that.

329. Who were the persons that generally measured on the part of the contractor? There were three, Mr. Gibbons, Mr. Holland, and Mr. Storey.

330. Mr. Edwards? No.

331. *By Mr. Robertson:* I think you said that was over-work that was done in your own time after office hours? Yes.

332. Subsequently you said the Commissioners increased your pay £100 a-year, in order to meet this extra work? Yes.

333. After you received that £100 a-year, did you conceive it to be your duty to work for the Commissioners after office hours? Yes, when called upon in the middle of the night, on Sunday or any other day: I was repeatedly called upon on Sunday during the time.

334. You did not consider it to be your duty before that? No; my office hours were from ten to four.

H. C. Mais,  
Esq.  
31 Dec., 1856.

TUESDAY, 6 JANUARY, 1857.

Present:—

MR. JONES,  
MR. SCOTT,  
MR. IRVING,

MR. EGAN,  
MR. WILSHIRE,  
MR. LANG.

RICHARD JONES, ESQ., IN THE CHAIR.

Edward Bell, Esquire, M. Inst., C. E., again called in and further examined:—

1. *By the Chairman:* In the course of your previous examination you stated to the Committee that open cut, as a rule, was to be preferred to tunnelling in carrying on sewerage works, because it enabled the contractor to do the work more thoroughly, and, also, because it was much cheaper when the depth to be excavated did not exceed a given number of feet? Yes.

2. I presume you still adhere to that opinion—that you have seen no reason to modify it? No.

3. In the course of the examination to which Mr. Rider was subjected by this Committee, he was asked on what grounds he adopted tunnelling so generally instead of adopting open cutting, and he stated various grounds on which he adopted tunnelling; and one of these was, that the Commissioners were bound to perform the work with as little damage to the citizens inhabiting the line of streets through which the sewers were carried—do you consider that open cutting necessitates greater damage to the surrounding property than tunnelling? No; no greater damage to the surrounding property. It might be a greater impediment to business.

4. You do not apprehend it would damage the adjoining properties? No; that should not be allowed. So far as damaging property, the only damage property could receive would be from the stones which might be cast out of the trench while they were blasting; that, I believe, I stated before. Where much rock has to be gone through, of a very hard nature, I have been inclined, and have, in many instances, gone past houses in dense parts of the City by tunnelling in preference to open cutting; but that is only in the parts of the City where the sewers are of considerable depth. Where the sewers did not exceed, I may say, fourteen or sixteen feet in depth—provided there were not many houses adjacent—and no great liability to damage property from stones flying out—I have done by open cutting.

5. In the sewers you have open cut since you have had charge of the works, have you found practically, that any damage has been done to the adjoining property? I have found that a large stone has gone through the roof of a warehouse in the lower end of Castlereagh-street. It was done through the carelessness of the workman, and I had him removed.

6. With due care you do not conceive that any damage would necessarily arise? Unless in thickly populated parts of the town, there would be no danger.

7. In these particular spots you would have tunnelled to avoid the possibility of danger. Yes.

8. Generally speaking there would have been no danger to property? None whatever, except from stones which might fly out of the trench.

9. Another ground on which Mr. Rider stated he had adopted tunnelling generally in preference to open cutting, was, that it interfered less with the thoroughfares than open cutting, as the stuff taken out from open cutting of any depth blocked up the street? I had more complaints where tunnelling was carried on, in Castlereagh-street, than where there was open cutting, on account of the stoppage, because, when tunnelling, the stuff is brought

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Edward Bell, up from the shaft, and must be deposited round the opening. I have more complaints in the middle of Castlereagh-street where I tunnelled, than in the upper part where I open cut. I only know of two complaints in the upper part, but I had several in the middle.

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10. In those parts where you had open cutting, did it cause the street to be completely blocked up? No; one side was kept open—perfectly free as a thoroughfare for carts.

11. With proper arrangements, you conceive that open cutting does not necessarily lead to the thoroughfare being blocked up? Unless we get to such an extreme depth that one side of the road would not hold the stuff.

12. Do I not understand you, that when the excavation proceeds beyond a certain depth, tunnelling is as cheap as open cutting? Yes, in point of cheapness. Where it is cheap enough to open cut, you may put the stuff on one side of the carriage way, without blocking up the whole street.

13. Mr. Rider also stated, that he adopted tunnelling, partly because open cutting would interfere seriously with the water mains laid down in the centre of each street; that by open cutting it rendered these pipes very liable to be burst, from the re-consolidation of the earth after the sewer had been finished? Yes; that does happen if the pipes are not properly supported, and, during the refilling of the trench, the ground below is not properly rammed up. As the excavated material is filled in again, it ought to be well rammed as it is put in up to the level of the pipe, and left until some rain falls, or some water is thrown upon it; then it settles down, and the trench should be filled up. Afterwards there may be a little settlement, and the pipe may probably break in one or two places, contiguous to the part where the ground has not been disturbed; that has been the case in Castlereagh-street in one or two places, but a few pounds has put them in repair.

14. Mr. Rider states that the pipe in Castlereagh-street broke six times? It was very badly filled in, and I complained frequently to Mr. Randle or his people about it, but they still chose to go on in that way. We had the water off the houses a day or a day and a half, and Mr. Randle had all the expense of putting the pipes in repair.

15. You are of opinion that the breaking of the pipe could have been obviated by taking proper care? Yes.

16. When the pipe did break, was there serious expense entailed on the City? Not on the city; the contractor paid it all; £4 or £5 covered the whole expense.

17. Were the inhabitants of the streets where the pipes broke subjected to much inconvenience, owing to the pipes having broken? No.

18. *By Mr. Irving:* Where were the pipes? In every case the pipes were very foolishly laid along the centre of the road, and the sewers also are made along the centre of the road. It was almost impossible in every case to prevent some inconvenience to the public; but the chief cause of the breakage was this;—where the open cutting began, the pipe emerged from the solid ground, and had to be suspended by ropes from cross timbers; when the trench was filled and the ropes cast off, the pipe with the water in it bent or settled in the middle, and the ground in the open cutting not being rammed in sufficiently, gave way, and caused the pipe to break. It would have cost the contractor no more to have rammed the ground properly than to have mended the pipe. There was only one person complained; his water was cut off for a day.

19. *By the Chairman:* You are of opinion, that with proper care the breaking of these pipes might have been obviated? Yes.

20. When the pipes have been broken it has entailed no expense on the Commissioners? So far as I am aware none has been entailed on the Commissioners, because the contractor had to pay for it.

21. So far as you know, no general inconvenience followed from the water having been cut off? No; there might have been for a few hours or for a day. One man came up and complained of the water being off one day, in consequence of the contractor not putting it to rights immediately. I ordered men to be sent, at any expense, to put the pipe in perfect order before the evening. That was done, and Mr. Randle has to pay for it; it is either deducted from his account, or he has paid the workman's account.

22. Mr. Rider stated, that the reason which weighed most with him, in tunnelling in Pitt-street, was the fact that numerous drains crossed the street; he said that, owing to the number of these drains, if this street had been open cut, these various drains would have discharged into the excavation, and would have interfered with the carrying on of the work. Would that have been the case.—Do you know, as a matter of fact, that there are such a number of drains in Pitt-street, or in any portion of the sewers in section No. 1, as to cause any serious inconvenience to the parties making the sewers? There are two or three drains at the crossing of Pitt and Hunter Streets, and one at Market-street; and I am quite of opinion, that if there had been open cutting at those places, in the first instance, instead of tunnelling, they would have been passed with half the trouble; in fact they had to be done by open cutting.

23. You are of opinion that the balance of inconvenience has been in tunnelling? That it was more inconvenient to tunnel than to open cut, owing to these drains.

24. If the ground had been open cut instead of tunnelled—? It would have been done at much less expense, because any water could have been taken out at the precise spot where it had come in, but in tunnelling it could be taken out only at the shaft; and the men, instead of having to work in the impure air which would be caused by sewage water in the tunnel, would have been perfectly free to have pumped or stopped such water out at once.

25. Do you know, as a matter of fact, that there are many drains across Pitt-street? There is one at Hunter-street, and one at Market-street, which pass over the sewer, and the level of these is so low, that two or three rings of brickwork are left out at the crown of the sewer in order to carry the drains past. If the rings had been all put in, they would have thrown the bottom of the drains so high, that they would have had no fall. When Pitt-street sewer is finished, we shall connect all these drains. I know that the sewer, where some of these drains

drains cross it, have no crown; these will have to be finished when the outlet is complete, and the drains can be connected to the sewers. In Hunter-street there are one or two, and I think there is one across Pitt-street at Market-street, and one passes under the sewer near the Union Bank, in Pitt-street. These are the only drains I know of which interfere with the sewers, excepting one in Phillip-street and one in Macquarie-place, which were also passed by open cutting, under Mr. Rider's direction.

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26. So far as you know, there is no such number of drains as at all to interfere with the construction of sewers by means of open cutting? None whatever.

27. In the event of these sewers having been carried out by means of open cutting, they might have been executed more cheaply, and the inconvenience arising from the drains might have been obviated more easily than by tunnelling? Yes, much more. I should have mentioned, that it would have cost the City no more, as Mr. Randle would have had to pay the expense, in any case, according to the contract, "reinstating and making good any such matters or things which may be removed, displaced, damaged, or destroyed."

28. Are not the Commissioners bound to give the contractor clear way in the construction of the sewer? None whatever.

29. Then in any case, whether the work had been by tunnelling or open cutting, it would have fallen on the contractor to have met the inconvenience or expense of crossing the drains? Yes. "The contractor, immediately upon being put in charge of any work, whether in writing or otherwise, shall be held responsible and chargeable for all neglects or defaults, accident or damage, of whatsoever kind, occasioned by, incident to, or consequent upon the said works, or any part thereof; and for the reinstating and making good of any matters or things which may be removed, displaced, damaged, or destroyed, during the performance of any such works, or by reason of the same."

30. Is that understood to include drains? Most decidedly. "The contractor shall indemnify and hold harmless the said Commissioners and their Officers against any and all actions, costs, losses, damages, charges, claims, expenses, and demands whatsoever, in respect thereof." These "matters or things" are very comprehensive.

31. In point of fact, you know of no material inconvenience that would have arisen from crossing the drains by means of open cutting? None.

32. And any expense that might have been incurred, would have been borne by the contractor and not by the Commissioners? Yes.

33. In point of fact, no expense has been entailed upon the Commissioners by reason of these drains crossing the streets through which the sewers have passed? No.

36. Then that, I presume, you hold would not be a ground entitled to much consideration in determining the question of open cutting or tunnelling? No.

35. *By Mr. Irving:* Would an open cutting between King and Market-street, along Pitt-street, have stopped the carriage way? No, only one side of the road. To keep one side of a road open, whilst a sewer is being made in the street, is very good indeed. In London, when a piece of sewer is made through a street, it is usual to stop up the street, although there the facilities for going along parallel streets are not so great as here, because they are not so contiguous as here. It would have been an inconvenience to the people if the street had been stopped up. When I speak of inconvenience, I refer to the detriment to business of the people who actually live in the street.

36. Would not open cutting have inconvenienced the inhabitants? Yes, between King and Market Streets, more than it would have done between Market and Bathurst Streets, where it was done by open cutting.

37. You are aware that there is a complete thoroughfare in Pitt-street? Yes, there is a large business in Pitt-street.

38. *By the Chairman:* Mr. Rider urged as a reason for preferring tunnelling to open cutting that it would break up the street,—the centre of the road—and that it would lead to the continual sinking of the road after the earth had been filled in, and would entail considerable expense from time to time in making good the roads—in restoring the crown of the road,—do you concur in that opinion? It is the same in tunnelling. We are to this day filling in the road in Elizabeth-street where it has been tunnelled, because they did not fill it in as they should have done.

39. That is where the shafts were sunk? No; between every shaft the road settles. I sent a man only yesterday to open one hole, where the ground had settled down, and fill it in properly.

40. The road has settled over where the tunnelling has been done? Yes; if it had been properly filled in, it would not have done so.

41. If it had been properly filled in between the sewer and the earth above the sewer? Yes, but I conceive that holes at a distance of a hundred feet apart, would destroy a road so much as to render it necessary to make the surface good from time to time until the road had become permanently settled again. If you observe in the streets where the shafts are, you will see that the carts employed in removing material from the shaft and the equipages which pass through the street, cut up the road so much, where the thoroughfare is so confined, as to render it necessary to reform them.

42. You find the surface as much injured where the work is carried on by tunnelling, as where it is done by open cutting? Yes.

43. The streets would sustain some damage, I apprehend, by open cutting, by the breaking up of the centre of the road? Yes; but I conceive that within a month or six weeks after the work has been done, the ground will have settled, if there has been rain. You would not replace the metal until the road had settled.

44. There would be a gradual settling for some few weeks until the earth had been filled in? Yes.

45. That settling, if the ground had been properly rammed in, would have ceased within the course of six weeks or two months? Yes; or in a less time if there had been a good shower

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46. Do you think the road in Castlereagh-street is likely to stand permanently? Yes; I should say that, in another fortnight or three weeks, it may safely be metalled.

47. What will be the amount of expense entailed on the Commissioners by making good the street through which the open cutting has been carried? The Commissioners have been at no expense in making it good; the contractor, if it settle, will have to fill it up.

48. And to make it good to your satisfaction, so that the road will permanently stand? Yes.

49. And that the road shall be as good as before? Yes. There was no metal there before; if there had been metal, the contractor would have to make it good.

50. Have any of the streets been metalled through which the sewers have been carried in section No. 1? Yes; several, but I am not aware that any have had blue metal on them where there has been open cutting.

51. What expense will it be to the Commissioners, where the streets have been metalled, to restore them to their previous state—I mean those streets where there have been open cuttings? Blue metal would cost about £1 a cube yard, that—

52. Were those streets metalled before? No; I am supposing if they were metalled.

53. I speak of metalling them so as to restore them to the condition in which they were before the works were commenced? If the metal were of the same stuff?

54. If the metal were of the same stuff? If it were blue metal, it would cost about 3s. 6d. a yard super.

55. I am anxious to ascertain what it would cost the Commissioners to restore the streets to the condition they were in before the sewerage works were commenced—I do not include metalling of a superior kind? It is the contractor's business to restore them to the same state as he found them, in any case, by this specification.

56. You conceive that if the contractor were required to carry out his contract properly and faithfully, whether the sewerage were carried on by tunnelling or by open cutting, he would have to put the streets in the same condition as they were before the works were commenced? Yes.

57. Consequently, open cutting would not entail upon the Commissioners any expense for making good the road? No; it ought not according to this clause, the sixth clause of the contract, which binds him to replace every thing and make it good.

58. Practically, have you since you have taken charge of the works, called upon Mr. Randle, in streets where he has open cut to restore them to the same condition they were in before he touched them? Yes, as nearly as I could tell. I could not tell in what state some of the streets were as they were commenced before I took charge, but he had to leave them in a fair state. Particularly, I called upon him to restore Macquarie-place.

59. I have stated to you the grounds on which mainly Mr. Rider justified his having had recourse to tunnelling in preference to open cutting; after hearing those grounds stated do you still hold to the opinion that few inconveniences would have arisen if the work had been carried on by open cutting instead of by tunnelling, and that there would have been no cost cast upon the Commissioners by reason of open cutting in preference to tunnelling? There would have been no cost to the Commissioners.

60. You are still of opinion that a very material saving would have been effected to the citizens by the sewerage works specified in the return you have handed in to the Committee having been carried on by open cutting instead of by tunnelling? To the extent specified in my return to the Committee; that return was made up from the sections, and in making it I took only those parts where I had not the slightest doubt it could have been done by open cutting or where it had been so done.

61. Where it could have been done advantageously, and without any serious inconvenience? Without any serious inconvenience; without any inconvenience at all, but the blocking up of one side of the street, leaving the other as a passage way for the carts and carriages to come to the inhabitants.

62. In the portions of the streets where you say open cutting would have been preferable to tunnelling was there any large amount of traffic? Yes; there is a tolerable amount of traffic in the southern end of all these streets—in Castlereagh-street, Park-street, and Elizabeth-street—Elizabeth-street particularly.

63. There was nothing like so much traffic as in the business parts of Pitt and George streets? No; these business parts I have omitted entirely; I have merely alluded to the part of the sewers north of Bent-street, and south of mid-way between King and Market streets.

64. And in the streets where you have stated that open cutting would have been preferable to tunnelling there is not any very large amount of business carried on? Not very large; not so much in comparison as in George-street, or the busy part of Pitt-street.

65. *By Mr. Egan*: There is hardly such a thing as a shop in Castlereagh-street? No; the only complaints I had in Castlereagh-street were from the doctors, they could not get their carriages to their doors, neither could their patients get to them—that was in the centre of the street; at the southern end of it Dr. Aaron was the only medical man; he said, "I do not complain, because I see what you are doing is useful, and very proper; but, as soon as you can relieve me, I shall be glad if you will."

66. *By the Chairman*: How long would it generally take you to open a cut the length of a street—? We can do it in half the time we can do it by tunnelling.

67. Say, for instance, between Park and Bathurst streets—how long would it be necessary to keep one side of the street closed? We open cut from Park to Market-street, and I think that was between five and six weeks.

68. And during that time a portion of the street was completely open? Yes; one side, and as the work was completed I had the trench filled up. 69.

69. About what length was open at one time? Nearly the whole of it; because I considered that we should stop the thoroughfare for a much less time by opening a long length at one time than by opening a small portion and filling it in before I commenced another; we did the whole of that distance in about six or seven weeks.
70. That is nearly double the average distance between the cross streets in any other portion of the City? Yes.
71. Say, for instance, between Market and King-street? More than twice. I had a complaint from a farrier who could not get horses in and out of his place; we made a way for the horses to pass, and I said he must be content to leave the carts out as I could not possibly make a roadway on both sides.
72. *By Mr. Scott:* There was an error in the direction of the tunnelling in some street—I refer to the S curve? Yes; in the main sewer.
73. Who first discovered that, and directed Mr. Randle to have it altered? I do not know.
74. It was not discovered by you? I discovered it myself after I came in two places in the main tunnel. I was left to discover it.
75. Was it corrected previously to that? Not at all. It must have been known previously to my taking office that the mis-driving existed, because lately I found a plan in the office made by a Mr. Carruthers, who was in the office before I joined it, and who left it some considerable time before. That plan shewed the mis-direction, and upon it somebody had pencilled an S curve. That plan was not in the office when I went there and looked over the plans; why it was not included in the list of plans made by Mr. Mais when I entered upon the office of City Engineer, or where it came from afterwards, I do not know.
76. Has it been determined that the sewerage works shall be carried on in the west section of the City? I believe it has.
77. Have you estimated at all what the cost will be under your present management in proportion to the east section? Not in proportion to the east section; but I have taken the extreme length of all my sewers, and the ground through which I shall have to go, and I have based my prices on these prices.
78. Do you think it will be equally as expensive as the present sewer? No, I do not; but I have based my estimate upon the prices of the present contract for the guidance of the Commissioners; but it will be considerably less.
79. What will be the probable reduction—will it be one-eighth, one-sixth, one-fourth, or a half? So much depends upon the contractors—what price they will send in; at times I have some tenders for work which amount to double that of my estimate, while other tenders are not more than half.
80. You say you think it will be done for much less? I am quite sure it will.
81. Do you know yourself any town or city in Great Britain or Ireland where open cutting has been carried on for any purpose whatever—have you had official control of any such works? Yes; in London, in several towns in Wales, and abroad in two or three instances.
82. In cities? Yes.
83. Can you state, with respect to London, the width and depth of the cuttings you have supervised? The great sewer, which passes through Moorgate-street to London Bridge, at the Mansion House, is, I think, in some parts, 25 feet below the surface of the road; that is open cutting. Open cutting in London is the rule—entirely the rule—they will not allow a contractor to tunnel without special permission to do so.
84. Will you state what was the width of the street you now allude to? The width of the streets varied at different parts of the sewer. At Moorgate-street it was about 60 feet wide; Princes-street about 40 to 50 feet; King William-street about 60 to 80 feet.
85. Still you had open cutting even to that depth? Yes. There was an open cutting for the sewer in the narrow part of Shoreditch, where it is from 35 to 40 feet wide, from 18 to 20 feet deep.
86. *By the Chairman:* What is the average width of the streets through which the sewers have been carried in Section No. 1? About 66 feet; they vary from 50 to 66 feet.
87. So that, generally speaking, the streets here are wider than those to which you have referred in London? I should think none of these streets are so wide as Moorgate-street or King William-street.
88. But rather wider than some of the narrow streets you have mentioned? Yes; than Princes-street was at that time, or the narrow part of Shoreditch.
89. But open cutting was carried through the narrowest streets? Yes.
90. And to a depth of 18, 20, and 25 feet? Yes.
91. *By Mr. Scott:* I think you stated that the obstruction caused by open cutting would operate only against the residents along the line of street where the work was actually being carried on? Yes.
92. Would this obstruction operate very materially against the public in general? No, it would not; particularly in a place like Sydney, where there are streets or thoroughfares running in the same direction so contiguous to each other.
93. Which of the two, open cutting or tunnelling, supposing both to have been carried on judiciously, would most obstruct the business of the public? Tunnelling, without doubt, would obstruct it the longest, and if the rock we had to go through were very difficult it would be three times as long as in open cutting; consequently, I cannot see that there is any objection arising from the obstruction of the street to open cutting over tunnelling.
94. *By the Chairman:* As I understand you, you think the balance of inconvenience is rather on the side of tunnelling—that the street would be broken up by the removal of the stuff taken from the tunnel, and that the inhabitants of the street would be put to greater inconvenience owing to the greater length of time tunnelling would occupy? Yes; where the tunnelling is very difficult it is certainly a greater hindrance to the public than open cutting.
95. When tunnelling is difficult, I understand you to say that it occupies three times as long as open cutting? Yes.

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96. When it is favourable what time would it take? About the same; for if it be favourable for tunnelling it will be favourable for open cutting. I should say about half the time where the ground is easy; because, in driving tunnelling, only one party of men can go on at the heading—there can be only two or three men working at one face—but in open cutting one can have men as thick as bees, as each man can get out his two or three yards. In many cases you would save half the time, and in others tunnelling would be three times that of open cutting. I am quite sure that has been the case in this part of Castlereagh-street, between King and Market streets, where it is finished.

97. So that you think, practically, there has been a greater amount of inconvenience to the inhabitants along the line of streets through which the sewer has passed than would have been sustained if it had been done by open cutting? Yes, and to the public generally, who go through the street.

98. *By Mr. Scott:* You have stated that the water pipes have been foolishly laid along the middle of the street? Yes.

99. Do you know at all by whom these were laid down? No; the system must have been commenced long since, and has been continued.

100. Continued up to what date? In some cases it has been necessarily continued until now; because the system must necessarily be entirely altered before it can be departed from.

101. Is that in new work? Yes. The reason given for laying down the pipes in that way is certainly a fair one in one respect. When you lay down a main in the middle of a road, the services which branch off from it are equally distributed on both sides of the road; one man has not forty feet of pipe to pay for, and another only ten. The object is to give an equal length of service on both sides; and it is very difficult to alter this arrangement without introducing a totally new system of mains.

W. B. Rider,  
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William Boughton Rider, Esq., C. E., again called in, and further examined:—

1. *By the Chairman:* You have, I believe, drawn up some statement in explanation of the part you took in connexion with the City Sewerage works? Yes; in answer to a question put by you on my previous examination before the Committee.

2. Do you now hand that statement in? I do. (*The witness handed in the same. Vide Appendix A.*)

3. Is there anything further in connexion with the matter that you wish to state to the Committee? No, that has been the principal object I have had in view in drawing up this statement.

4. Beyond what is stated here, there is no farther statement you wish to make to the Committee? None whatever.

5. *By Mr. Wilshire:* I would wish to know whether, in the statement you have submitted to the Committee, there are any reflections upon the members of the former Committee? No names are mentioned.

6. Are there any reflections upon that Committee? I may have made some reflections upon the Report of the former Committee. (*The Clerk of Committees read the statement. The Witness withdrew. After some discussion on the part of the Committee, the Witness was re-called, and further examined.*)

7. *By the Chairman:* Did you consider that Mr. Mais had sufficient assistance to enable him to measure and supervise the work in a proper manner, when the sewerage in Section No. 1 was generally entered upon? I think he had.

8. When the sewers in several streets had been commenced, did you at that time think Mr. Mais had sufficient assistance to enable him to do his work in a correct and satisfactory manner? I think, from the limited staff that was employed, greater exertion, perhaps, would have been required from Mr. Mais; but I think he had, during the progress of the work, sufficient assistance to enable him to see that the work was properly executed.

9. Did Mr. Mais ever complain to you that he had more to do than he could perform, efficiently and properly? I cannot remember any such statement having been made to me by Mr. Mais.

10. Then, at any time during the progress of the work, you had no reason to think that Mr. Mais had more duty imposed upon him than he was able to discharge? No; for he was relieved as soon as a proper person could be found to supervise the work.

11. Previous to this had he any difficulty in carrying on the work? Only with the exception of a few days during the period of obtaining such assistance.

12. Then you think there was no application from Mr. Mais for assistance, and that he made no complaint that, in the event of its not being afforded, he could not discharge his duty properly and effectually? Certainly no application in those terms.

13. *By Mr. Scott:* I think you have stated, in the paper you have handed in, that the engines for the Water Works have arrived? I believe they have, or the greater part of them. They are equal to work up to 85-horse power—so I learned from the mechanical engineer who has seen their construction, and brought them out here to superintend their erection.

14. Have you seen them? I have not examined them.

15. Can you state whether they are exactly on the plan you recommended? With the exception of the pumps, the cylinders of which are somewhat contracted, precisely.

16. According to the plan you sent Home? Yes.

17. *By the Chairman:* The diameter of the pump has been reduced? Yes.

18. Have you heard on what ground it has been reduced? No; that is a very small matter—a matter of detail.

19. *By Mr. Egan:* You were the City Engineer at the time the large additional pipes were sent for? Yes.



20. Did you make an estimate of the expense and quantity? Yes.
21. Did you not first ascertain and determine what should be the line before you made the estimate? Yes.
22. Was that, in your opinion, the best line where they could be laid down? I thought so then, and I think so now.
23. *By Mr. Wilshire*: Did the Commissioners ever advise with you as to the efficiency of the superintendence of the works in the sewers? The Commissioners have stated to me, or rather, they have given me authority generally, to employ whatever assistance I needed, and as assistance has been required, so have I taken it on, according to the best of my judgment of its requirement.
24. Did they not urge upon you, on one occasion, the necessity there was for having a person to superintend the laying of the bricks, and the proper mixing of cement? They did. The person then employed, the foreman of the work, could see one and all of the different parts of the work then going on in the district which he overlooked.
25. Could one person see to the mixing of the whole of the cement, as well as to the quality of the bricks? In his own particular district. Of course it would have been impossible for him to have seen every particle of cement mixed, but he could, at all times, see the general quality of the cement.
26. There was a person appointed for that purpose? It was part of the duty of one of the overseers under Mr. Mais to see that proper material of every description was placed on the ground.
27. *By Mr. Egan*: You considered, at the time, that there was sufficient strength for the purpose of supervising the work? Yes.
28. Notwithstanding what the Commissioners thought, you, as a practical man, thought the supervision was quite sufficient? Yes; and I do say, and I assert it without fear of contradiction, that, with the exception of a few imperfections, and this error in Macquarie-street, that the construction of the sewerage works is inferior to none I have ever met with. I do not state that on a limited experience, but on an experience of many years.
29. With respect to the water. Do you know whether the line now intended will be shorter than that you determined upon? I have not seen the exact plan, and, therefore, I would prefer giving no opinion upon it.
30. You do not know whether it will be less or more expensive than your own? For the reasons I gave the other day, I think the expense will be materially increased.
31. If the line adopted by you had been carried out, there would have been no necessity to have incurred the expense of shifting? There would not have been.

W. B. Rider,  
Esq.

6 Jan., 1867.

## APPENDIX A.

### MR. RIDER'S STATEMENT.

At the conclusion of this inquiry into the City Commissioners' Department, and particularly that portion of it which refers to the City Sewerage and intended Water Works, of which I had for more than two years the charge, I wish to make a few observations, and have to beg the Committee will grant me every indulgence, if, during the course of these observations, anything should be said that may appear either abrupt or disrespectful to the past—but more particularly to the present—Committee of Inquiry.

I have had but little ambition hitherto, to enter into nauseating and profitless explanations, to endeavour to remove false impressions and prejudices; *conscientious rectitude alone consoled me*. To your Committee, I have, however, in opposition to these feelings, and in addition to the evidence you have afforded me an opportunity of giving, in answer to your questions during your present inquiry—I have a desire to touch on some subjects which may or may not have been embodied in this inquiry.

In order that the Committee may have a clear perception of my position as Engineer in Chief to the Commissioners, and also of the manner in which I have performed the duties in connexion with that position, it may be necessary to give a cursory description of the course adopted by myself, and which I may here state, is the course universally pursued by Engineers.

Without adverting to the many harrassing matters connected with the then existing state of the City sewers (and many other matters), I will confine my observations to the new system about to be carried out in conformity with the provisions of the Act.

Having examined the surveys and sections in the office of the City Surveyor, I found that none existed on which any reliance could be placed. Immediate steps were taken for the production of a proper survey and sections necessary for the execution of the work about to be carried out; and this step, (though it was not optional with myself, being strictly enjoined in the Act.) It may be well to notice, that the propriety of this, my first step, was questioned, and which, to any one of the commonest understanding, must have been known to be absolutely a necessary proceeding. However it was eventually reluctantly acquiesced in, and the trigonometrical survey progressed to such a state of advancement as to enable me to commence the work; and having matured the general system that I intended to adopt, I caused accurate sections of the whole of the City to be made. I then made a lengthened Report (see printed Report), detailing my views to the Commissioners, who submitted the whole to His Excellency Sir W. Denison, who disagreed with me on one point only. The general plan was also submitted to many others who, I thought, were capable of forming a correct judgment of its merits, and all coincided with my views.

It remained only now to commence the work. The necessary documents—that is to say, the conditions of contract, drawings shewing the general character of the work intended,

W. B. Rider, and the schedule of prices at which the work was to be performed, were prepared. Tenders were invited, through the medium of the daily Papers, for upwards of one month; four tenders only were received.

Esq.  
6 Jan., 1857.

The Commissioners requested me to fill in a schedule, at prices at which I thought it probable the work could be performed; or, perhaps, it might only be for comparison with the prices contained in the schedules of the various tenders. That having been completed, and handed to the Commissioners, the various tenders were delivered to me to report upon. The method I adopted, in order to arrive at the comparative merits of the different tenders, was this:—I selected from the schedule the items of which the bulk of the work would consist, and calculated the cost of constructing ten feet forward of each sewer, affixing to each item the price at which each tenderer proposed to execute the work. The analysis thus made was forwarded to the Commissioners, and the tender of Mr. Randle accepted. The acceptance of this tender has been most unfairly condemned, inasmuch that I did not include in the analysis of tenders the true proportions of rock and soil, and also of tunnelling, the latter,—a description of work the price of which in Mr. Randle's schedule was by far the highest; and it has been urged, that in order to have arrived at the true comparative merits of the tenders in the analysis, I ought, in justice to the interests of the City and to my professional reputation, to have made such an examination as would have enabled me to ascertain what proportion there would be of rock or soil, and what proportion of tunnelling or open cutting; in answer to which I have to state, that from parties possessing local information of the strata, before making the analysis alluded to, I did endeavour to ascertain, as nearly as necessary for the purpose, the proportions of rock and soil. To have ascertained the exact proportions of each would have involved an examination of no ordinary character. From the information thus obtained, I arrived at the conclusion, that the proportions of two-thirds soil and one-third rock existed. Had such an examination been made, as has been urged, it could not have contracted the ultimate expenditure, for the sole reason that *through* it the general plan or character of the work would not have in any way been controlled; so far, then, the analysis has been made with equal fairness to all parties.

The question, therefore, to be disposed of, is, why so much tunnelling has been performed under the highest figure in Mr. Randle's tender. The practical reasons, why this mode of executing the work was forced upon me, I have repeatedly given in evidence before the Committees, and solely for causes such as I have described—“See evidence” at the different examinations; and though Mr. Randle's price was the highest (and I may here state I think the price a fair one) at this period it could not alter the necessity of executing the work in that method. Mr. Randle's interest, as has been urged in a most unprincipled manner, to the contrary, never entered my imagination, and I am in utter ignorance at the present moment whether Mr. Randle's rate of profit is greater in tunnelling than in open cutting. If his tender was framed on the usual system adopted, the rate of profit would be in equal proportion throughout every item. I may now again repeat that I did not feel myself warranted in the expenditure (to what amount I could not tell, nor what amount of delay it would create) necessary to ascertain the existence of the size and the course of the old drains, about which some of the best informed and oldest inhabitants of the City have little or any knowledge.

It can then well be imagined what the expense of such an examination would have been, and which, simply for the purpose of examination, would have been thrown away. When such local obstructions presented themselves, my determination was to keep clear of, and as far as possible not interfere with, them, as, from a variety of causes, they might endanger the solidity of the work. I may add that *I commenced the work by open cutting the whole length of New Pitt-street, until impeded by the very causes I have adverted to.* To men, therefore, fully acquainted with the nature and difficulties of the work, no doubt, on this head the practical reasons I have advanced—“See answers to Queries 221 and 227,” are sufficient authority for having had recourse to so much tunnelling in carrying out the work.

The effect of these reasons, however, have been payments to Mr. Randle on the item of driving, vastly in excess of what the other tenderer's *professed* to be able to perform the work; and had it been possible to have ascertained the extent to which tunnelling would have to be prosecuted, and *price the only consideration*, no doubt the contract would have been entrusted to Mr. Farrelly, who, in his tender, professes to be able to perform in tunnelling for three shillings and six-pence, for what Mr. Randle has received five pounds, and what Mr. Murphy proffered to perform for two pounds ten shillings.

Can it for one moment be supposed that Mr. Farrelly would have been able to have carried out his contract; and as neither of these gentlemen had ever had any experience in works of a similar character, or, as far as I could learn, no experience in works of an engineering character at all. I could only have arrived at the same conclusion in the case of Mr. Murphy as I did in the case of Mr. Farrelly, admitting there was a wide difference between the two; and I am strongly fortified in this opinion by the fact of Mr. Randle (he finding nearly all the necessary material) having paid his foreman, for labour only, the sum of ten pounds two shillings and six-pence, for what Mr. Murphy professed to be able to execute (finding all requirements) for seven pounds ten shillings, and which, I believe, subsequent experience has proved has been performed actually at a loss to Mr. Randle. Now, when other items, indeed every other item, in Mr. Murphy's tender is considered, and more particularly those items of which the bulk of the work would consist, and the value of which, in connexion with his business, he might be presumed to have more immediate knowledge, I find he was 25, 35, 50, and, in some instances, almost 150 per cent. higher than Mr. Randle's prices, little reliance could be placed on his estimate at which he could perform the tunnelling.

But on the assumption that he would have been able to execute the tunnelling at his price, and that this examination should have been made for the purpose, it would appear, of determining

determining truly the comparative value of Mr. Murphy's and Mr. Randle's tender, the expense attendant on such an examination, were it possible to make it, for this particular purpose alone; this expense, together with the vast increase in every other item in Mr. Murphy's tender, over that of Mr. Randle's, (from calculations which I have made) lead me firmly to believe, and I assert with every degree of confidence, that the work that has been performed by Mr. Randle would *not* have been executed at a *less* cost by Mr. Murphy. I do then insist, without fear of contradiction from unprejudiced and *qualified* persons, that the acceptance of Mr. Randle's tender by the Commissioners was the one they ought to have accepted as the most *eligible*.

W. B. Rider,  
Esq.  
6 Jan., 1857.

The conditions of contract having been complied with by Mr. Randle, copies of the plans and sections of such portions of the work it was proposed to proceed with were furnished to Mr. Randle, and the work commenced. Mr. Mais was appointed to act as Resident Engineer over the work, with the usual instructions, which were generally to see and examine all material introduced into the work, in fact to see the work carried out in detail as it should be, and to take the usual admeasurements for the periodical payments.

I will now refer to the instructions given, and the manner in which Mr. Mais performed that portion of his duties which related to his taking admeasurements, and in connexion with which it has been so frequently asked me in Committee—what check I had on Mr. Mais? My replies have invariably been that I had none; that in the ordinary course of professional practice it was not usual; and further, from the nature of my instructions as to the method to be adopted, I never for one moment considered that I required any check on my Assistant. The instructions to Mr. Mais, in taking the admeasurements, were that every and each succeeding fortnight he should re-measure the work from beginning to end, which system had he implicitly followed, any error committed in one fortnight's measurement would have been discovered in the subsequent fortnight's measurement. As by such a system Mr. Mais would, each admeasurement, check *himself*, I deemed it unnecessary to employ additional services to check him; the quarterly measurement was all that was required for every purpose. The errors discovered in Macquarie-street shew, without doubt, that Mr. Mais (at least in this street) must have neglected my instructions, from which he cannot be exonerated. No doubt, with reference to the excess of work which he returned, he over-estimated the quantity or the length of driving, and from it calculated the quantity of brickwork, thereby causing the error on that head. With respect to the absence of the intended quantity of brickwork in Macquarie-street as reported, but of which I have no personal knowledge, I can offer no explanation or excuse for Mr. Mais, if such really be the case, and to the extent asserted.

Without attempting in any degree to excuse these errors, I have to state they have been committed without prejudice to the public interest, inasmuch as they were discovered and rectified by the quarterly measurement, and before the large reservation in the shape of per-centage (retained solely, I may almost say, to meet the contingency of error) was disbursed to Mr. Randle. This, in conjunction with the general short payments, in opposition to the terms of contract, was more than trebly sufficient to cover the excess of work returned by Mr. Mais, in the certificates of September 27th, October 11th and 25th, and the result shews there was sufficient check not only on Mr. Mais, but upon Mr. Randle being overpaid, for the due protection of the public interests.

It has been asked why I signed the certificates, the correctness of the details of which I was not cognizant. I will only refer to every financial or other department, and point to the course pursued, in which, on the *authority* of the parties entrusted with making up the whole matter generally contained in returns, the *head* of the department attaches his signature.

With reference to the water works, suffice it for me to say that I bestowed every care and attention in collecting the most accurate information, and adopted every precaution necessary for the accomplishment of those works, to the advantage of the City, and with credit to myself. The engines as ordered by me, and which it has been stated to yourselves would not perform the work I had designed they should perform, and would only work up to 55 horse power, instead of 75 horse power as intended. I have learned since their arrival in the Colony, in opposition to that assertion, that they are capable of being worked up to 85 horse power.

I will not trespass further on your time; but from these observations, imperfect and incomplete as they are, you may perhaps be enabled more easily to arrive at a conclusion, whether the sarcasms and insults which have been heaped upon me, as to the manner in which I have conducted the public works of this City—more especially the sewerage works—have been merited. From the opinion of unprejudiced men, of competent understanding, I have no occasion to shrink. I beg to hand in, as desired, copies of some testimonials produced to the Commissioners, with reference to my appointment.

(Copy.)

London, Eaton Square,  
18 October, 1849.

The bearer, Mr. William Rider, is a Civil Engineer, and was in my employment for about two years and a half, during the time constructing the London and Brighton Railway, and was employed both on the works of the line itself, as well as engaged in the office in making out the working drawings, and also in taking the levels for the sections, and all the other requirements of the different parts of the works.

He is sober, steady, and industrious, and understands his profession well; and I have no doubt that he will give satisfaction to any party who may wish to avail themselves of his abilities.

JOHN U. RASTRICK, C. E.

(Copy.)

W. B. Rider, (Copy.)  
Esq.

15, *Regent-street*,  
7 *September*, 1849.

6 Jan., 1857.

DEAR RIDER,

I am glad of an opportunity of expressing my opinion, formed from personal experience of your capacity as an Engineer. I never saw more incessant and determined exertion than that exhibited by you, during the time we were engaged together. It was only equalled by the economy with which your proceedings were conducted, and which alone, in my opinion, would entitle you to succeed in obtaining any similar employment you may desire to have.

I am,  
Yours very faithfully,  
E. H. BRAMAH.

(Copy.)

40, *Connaught Terrace*,  
18 *September*, 1849.

I beg leave respectfully to certify that I have long known Mr. Rider the Engineer, and have had reason to place great confidence in his ability, zeal, assiduity, and attention to his professional duties.

THOS. HOPPER.

(Copy.)

*Beaminster, Dorset*,  
5 *September*, 1849.

MY DEAR SIR,

Mr. Rider, who was the active Engineer of the Bucks Railway, is very desirous of engagement as one of the Engineers of the Great Indian Peninsular Railway Company.

His qualifications as an Engineer are undoubted; and such being the case, I can testify to what is a very great desideratum in the prosecution of any railway in India, which is—great activity and energy of character; and being in the prime of life, with a good constitution, is very likely to prove a valuable addition to your staff;—it is upon these grounds I commend him to your notice.

Believe me,  
Sincerely yours,  
J. A. MOORE,  
Director in the East India Company.

J. G. FRITH, Esq.,  
One of the Directors of  
the Indian Railway.

(Copy.)

11, *Buckingham-street*,  
*Adelphi*, 18 *September*, 1849.

MY DEAR SIR,

Upon being informed by you, that it is your intention to become a candidate for one of the appointments of Acting Engineer upon the Great East Indian Peninsular Railway, and being requested to state what I knew of your capabilities to fill such a situation, I beg to say that I consider that you are well qualified to fill such a post, from your connexion with and experience in railway matters in this country.

— RIDER, Esq.

Yours very faithfully,  
P. PRICHARD BALY.

1856.

NEW SOUTH WALES.

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**AUSTRALIAN GAS LIGHT COMPANY.**

(CLAUSE 116, MUNICIPAL COUNCIL BILL.)

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*Ordered by the Legislative Assembly to be Printed, 25 November, 1856.*


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To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the Shareholders of the Australian Gas Light Company,—

SHEWETH,—

That in a printed copy of the Bill now before your Honorable House, intituled, "*A Bill to re-establish a Municipal Council in the City of Sydney*," your Petitioners have observed (clause 116) a proviso to the effect that if the Council and the Directors of the Gas Company shall not agree as to the price to be paid for the supply of Gas to the lamps lighted at the expense of the Council, such price shall be settled by arbitration.

That your Petitioners cannot but regard such proviso, in a matter purely commercial, as at variance with the principle of free trade.

That your Petitioners would humbly represent to your Honorable House, that, in their view, the only consideration which could justify such an exception from that principle would be, the concession, on the part of the Legislature, of some exclusive privilege to the Company concerned therein; but no such privilege having at any time been conceded to your Petitioners, they trust it will be apparent to your Honorable House, that the said proviso would be an unjust interference with their commercial liberties.

Wherefore your Petitioners humbly pray that your Honorable House will be pleased to take the premises into your favorable consideration, and decline to pass the proviso herein referred to.

And your Petitioners will ever pray, &c.

[Here follow 14 Signatures.]

Sydney, 13 November, 1856.

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1856.

## NEW SOUTH WALES.

## SYDNEY MUNICIPAL COUNCIL BILL.

(CITIZENS OF SYDNEY.)

*Ordered by the Legislative Assembly to be Printed, 9 December, 1856.*

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned Citizens of the City of Sydney,—

SHEWETH,—

That your Petitioners hail, with feelings of unfeigned satisfaction, the prospect which is now presented to them, of the revival of Representative Municipal Government in this City.

That while in its main features the Bill for the establishment of a Municipal Council in this City, now before your Honorable House, has their general assent and approval, still it is, in the opinion of your Petitioners, in some important particulars defective, and in others objectionable.

That your Petitioners respectfully urge that the said Bill is defective,—

1st—In the absence of any provision for the endowment, from the unappropriated public lands within the City, of the proposed Municipal body, so as to diminish the unduly heavy pressure upon the Citizens of local taxation for the carrying out of public works now so urgently required—for the establishment of public institutions of charity and utility—and to prevent the necessity for any recourse, for Municipal purposes, to the General Government and the General Revenue.

2nd—In the withholding from the Citizens certain rights and privileges, obviously essential to a perfect and efficient system of local self-government, such as the control and regulation of the City Police Force—the granting of licenses for houses of public entertainment, and the regulation of the same—and the ordinary administration of justice within the City.

That your Petitioners respectfully submit, that all taxes, rates, tolls, and dues arising or levied within the Municipality, and in particular the fees or dues paid in respect of licenses to exercise any particular trade or calling within its limits, are strictly Municipal in their nature, and belong of right to the Citizens; and, in consideration of their relieving the General Government from all care and responsibility for the welfare and good government of the City, that the same should be made over to the Municipal body, as or in aid of the General Municipal Revenue.

That your Petitioners are of opinion that the Municipal franchise proposed by the Bill is highly objectionable, in that it is founded on the basis of the political franchise created by the New Constitution Act. Such a franchise they look upon as opposed to all experience of Municipal Institutions in the Mother Country, in which the franchise is properly confined to the owners of property and occupiers within the Municipality, as the persons exclusively interested in the due administration of funds raised by their own taxation.

The franchise proposed by the Bill will, in the opinion of your Petitioners, tend to degrade the proposed Corporate body into a mere engine for aimless political agitation, rather than to fulfil the mission of social usefulness which your Petitioners earnestly desire for it.

That your Petitioners are unanimously of opinion that the mode of voting at all elections of Corporate officers should be by way of ballot.

Your Petitioners therefore humbly pray your Honorable House to take the premises into their consideration, and to effect such alterations in, and additions to, the proposed measure, as may effect the objects to which they have invited your attention in the foregoing Petition.

And your Petitioners will ever pray, &c

[Here follow 1,037 Signatures.]





1856.

NEW SOUTH WALES.

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# VACCINATION.

(REPORT FROM MEDICAL ADVISER TO GOVERNMENT.)

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*Ordered by the Legislative Assembly to be Printed, 3 June, 1856.*

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*REPORT from the Medical Adviser to the Government, to the Honorable the Colonial Secretary, with the Annual Summary of Vaccinations.*

*Parramatta, 15 February, 1856.*

SIR,

I do myself the honor to enclose, for the information of His Excellency the Governor General, and in accordance with the directions received in your letter, a Summary of the Returns received from the several District Vaccinators, and also the special Return and Report of the Superintendent of the Vaccine Institution in Bent-street.

2. The numbers reported this year are much smaller than last year, owing partly to the doing away of the office of Suburban Vaccinator, and to the general apathy on the subject, as mentioned by Dr. Rutter's Report.

3. Dr. Rutter recommends that a compulsory enactment should be passed in favor of Vaccination; and Mr. Falder, of Wollongong, points out that country people will not bring their children (and, indeed, cannot safely do it) to the different centres of Vaccination. He thinks that a small additional fee should be allowed to the vaccinator for vaccinating such cases at their own homes.

4. The result of the Returns point out the great difference in the cost of Vaccination, owing partly to the difference of population, and partly, probably, to the exertions of the vaccinators. The extremes are Newcastle and Brisbane. At Newcastle the cost of Vaccination, per case, is 3s. 1½d., while at Brisbane each case costs 14s. 3d.

5. Looking either to the results reported last year, or to the present Report, it appears to me that they are unsatisfactory as far as regards the object to be attained, which is the vaccination of the whole infantile population, though, perhaps, as much as can be expected, from the trifling sums allotted to the object.

I have, &amp;c.,

R. GREENUP,  
Medical Adviser to the Government.

TO THE HONORABLE  
THE COLONIAL SECRETARY.

*Vaccine Institution, Sydney,*  
9 January, 1856.

SIR,

I do myself the honor to transmit, for the information of His Excellency the Governor General, a Report of my proceedings during the year 1855.

2. I regret to report that great apathy and indifference have been exhibited by the public to the advantages held out, and facilities afforded, of having their children vaccinated, by my daily attendance at the Institution in Bent-street, and weekly at the Benevolent Asylum.

3. I am much disappointed that my attendance at the latter institution has been so barren of good results; several weeks having passed without a case presenting itself.

4. I would beg respectfully to suggest, for His Excellency's consideration, that a measure, such as exists in the Mother Country, and in the neighbouring Colony of Victoria, be initiated in this Colony, namely—a compulsory Vaccination Act.

5. I have, in accordance with my instructions, made personal visitations, and have found that a very large number of children have not undergone the operation; and am satisfied that none but compulsory measures will do away with the evil, and that, should Small-pox make its appearance in this City, it will find thousands of victims.

6. I have supplied nearly 400 medical and other individuals with Vaccine Lymph, and have transmitted large quantities to New Zealand and the Islands of the Pacific; and am happy to report that I have a large supply in my office, which will enable me to meet any emergency which may present itself.

7. I have further the honor to submit the enclosed detail of duties performed during the year 1855.

I have, &c.,

JOHN YATES RUTTER,  
Superintendent.

R. GREENUP, Esq., M.D.,  
Medical Adviser to the Government.

ANNUAL RETURN of Persons Vaccinated by the Superintendent of the Sydney Vaccine Institution from the 1st January to the 31st December, 1855.

	1 Month and under 1 Year of Age.						1 Year and under 5 Years of Age.						5 Years and under 10 Years of Age.						10 Years and under 15 Years of Age.						Adults.					Total Number of Cases of Vaccination.							
	Males.	Females.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Males.	Females.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Males.	Females.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Males.	Females.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Males.	Females.	TOTAL.	Successful.	Unsuccessful.	Unascertained.							
Jan. to March 31.....	20	22	42	42	..	..	1	3	4	4	..	..	3	..	3	3	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	25	25	50	50	..	..
April to June 30.....	24	28	52	52	..	..	15	14	29	29	..	..	13	3	16	9	9	..	..	..	1	1	..	..	..	..	..	..	..	..	..	45	47	92	92	..	..
July to Sept. 31.....	49	48	97	97	..	..	32	22	54	54	..	..	16	10	26	22	22	..	..	5	2	7	7	..	..	..	..	..	..	..	99	82	181	181	..	..	
Oct. to Dec. 31.....	20	29	49	46	3	..	19	25	44	41	3	..	14	10	24	24	..	..	1	2	4	4	..	..	..	..	..	..	..	54	69	123	117	6	..		
	113	127	240	237	3	..	67	64	131	128	3	..	35	23	58	58	..	..	7	6	13	13	..	..	1	3	4	4	..	..	223	223	446	440	6	..	

1st January, 1856.

GENERAL RETURN of Persons Vaccinated at the Government Vaccine Institutions, from the 1st January to the 31st December, 1855.

	1 Month and under 1 Year of Age.						1 Year and under 5 Years of Age.						5 Years and under 10 Years of Age.						10 Years and under 15 Years of Age.						Adults.					TOTALS.							
	Male.	Female.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Male.	Female.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Male.	Female.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Male.	Female.	TOTAL.	Successful.	Unsuccessful.	Unascertained.	Male.	Female.	TOTAL.	Successful.	Unsuccessful.	Unascertained.							
Sydney.....	113	127	240	237	3	..	67	64	131	128	3	..	35	23	58	58	..	..	7	6	13	13	..	..	1	3	4	4	..	..	223	223	446	440	6	..	
Brisbane.....	9	19	28	27	1	..	2	3	5	4	..	..	1	2	3	3	..	..	1	1	2	2	..	..	..	..	..	..	..	..	13	25	38	35	3	..	
Newcastle.....	36	44	80	80	..	..	33	32	65	65	..	..	10	3	13	13	..	..	1	1	2	2	..	..	..	..	..	..	..	80	80	160	160	..	..		
Maitland.....	14	11	25	25	..	..	21	13	34	33	..	..	10	11	21	21	..	..	11	11	22	22	..	..	..	..	..	..	..	65	65	130	130	..	..		
Wollongong.....	34	30	64	60	4	..	24	23	47	43	..	..	14	8	22	20	..	..	9	14	23	23	..	..	..	..	..	..	..	69	58	127	117	10	..		
Bathurst.....	9	4	13	8	1	4	18	15	33	29	..	4	6	6	14	10	1	3	1	2	3	2	..	1	..	..	..	..	..	34	29	63	48	3	12		
																																930					

Nine hundred and thirty successful cases.

R. GREENUP.



1856.

NEW SOUTH WALES.

## HEALTH OFFICER.

(REPORT FOR 1855.)

*Ordered to be Printed.**REPORT from the Health Officer of Port Jackson, for the Year 1855.**Sydney, 1 June, 1856.*

SIR,

In conformity with directions contained in your letter of instructions to me, I have the honor of submitting to you, for the purpose of being laid before the Legislative Assembly, the following Report for the past year.

The number of vessels visited by me, from the 1st January to the 31st December, 1855, was 409.

There have been twelve vessels placed in quarantine, of these nine were vessels conveying Government Emigrants, two were private passenger ships, and the remaining one Her Majesty's Ship of War "Juno." The cause of these vessels having been detained in quarantine was, that there was contagious or infectious diseases on board of them, at the time of their arrival, or that some of the passengers, or crew, had been infected with contagious or infectious disease during the voyage;\* in the latter case the detention in quarantine was of short duration, the ship with the crew and passengers being released as soon as the people had washed their clothes, and performed those other measures of purification which were deemed necessary.

In the Return hereto annexed, will be seen the ports from which these vessels sailed, the number of deaths which occurred among the people of each vessel, during their detention in quarantine, the duration of the quarantine in each case, and the nature of the disease which occasioned it.

The rate of mortality among the people treated at Quarantine Station is low, especially when it is considered that almost all of the patients were children of a very tender age.

Although cholera and small pox have prevailed extensively at Mauritius during the past year, I have not considered it necessary to recommend that vessels arriving from thence, should be subjected to quarantine, as was the case with vessels coming from San Francisco, as I have found no difficulty in obtaining from masters of vessels trading between this port and Mauritius, a correct statement of the health of the people on board their vessels.

With

\* See Quarantine Regulations published by authority, as well as copy of Act 3 Wm. 4, No. I, passed 8th July, 1822, 5 Vic., No. XII., passed 14th December, 1841, and 17 Vic., No. XXIX., passed 24th October, 1853.

With reference to that portion of your letter, directing me to offer any suggestions that may occur to me, for improving, or rendering more efficient, the regulations relating to quarantine, I beg to state that, having in view the release of the vessels from quarantine at the earliest period, compatible with a due regard for the safety of the public health, I have always made a special recommendation as to the course to be pursued in each instance of quarantine, dealing with each case on its own merits; and this is the plan that I would advise should always be adopted, in preference to any system of classification, as by it the object of the quarantine would be more certainly secured, with the least possible detention and inconvenience to passengers and ships.

I have, &c.,  
 (Signed) HAYNES GIBBES ALLEYNE, M.D.,  
 Health Officer.

THE HONORABLE  
 THE COLONIAL SECRETARY,  
 &c., &c., &c.

RETURN of the Number of Vessels placed in Quarantine by the HEALTH OFFICER of Port Jackson, from 1st January to the 31st December 1855, shewing the Name of each Vessel, from what Port, Duration of Quarantine, Number of Deaths in Quarantine, Nature of Disease, and whether Emigrant or other Vessel.

No.	Name of each Vessel.	From what Port.	Duration of Quarantine.	Number of Deaths.	Nature of Disease.	Whether Emigrant or other Vessel.
1	Ebba Brahe .....	Plymouth....	22 days	2	Measles.....	Emigrant Vessel
2	Queen of England	Southampton	12 do	nil	Small Pox ....	Ditto
3	Resistance .....	Rajasthan ....	11 do	nil	Measles.....	Ditto
4	Juno H.M.S. ....	Singapore....	30 do	nil	Small Pox ....	Man-of-War
5	Abdallah .....	Plymouth....	2 do	nil	Measles.....	Private Passenger Ship
6	Bengal .....	Southampton	19 do	nil	Small Pox ....	Emigrant Vessel
7	Sultana.....	Plymouth....	6 do	nil	Scarlet Fever ..	Ditto
8	Gem .....	Hamburgh ..	5 do	nil	Scarlet Fever ..	Private Passenger Ship
9	Constitution ....	Southampton	65 do	13	Small Pox ....	Emigrant Vessel
10	Golden Era .....	Liverpool ....	5 do	nil	Scarlet Fever ..	Ditto
11	Mangerton .....	Plymouth....	39 do	nil	Small Pox ....	Ditto
12	Chowringhee ....	Southampton	16 do	1	Scarlet Fever ..	Ditto

1856.

NEW SOUTH WALES.

## ORDNANCE RETURNS.

*(Ordered to be printed.)*

No. 1.

*Office of Ordnance,  
Sydney, 26 March, 1856.*

RETURN of all Moneys which have been received by, or now are payable to Her Majesty's Ordnance Department, (since the date of the last Return, 2nd April, 1855), in respect of Lands, Tenements, or Buildings, vested in the Principal Officers of Her Majesty's Ordnance in New South Wales, under the provisions of the Act of Council, 4th Victoria, No. 2.

DESCRIPTION OF PROPERTY.	NAMES OF OCCUPIERS.	RENT PER ANNUM.	AMOUNT RECEIVED.
Military Buildings, and Lands:—		£ s. d.	£ s. d.
Moreton Bay ... ..	} Colonial Government ...	0 1 0	0 1 0
Parramatta ... ..			
Windsor ... ..			
Liverpool ... ..			
Bathurst ... ..			
Newcastle ... ..			
Pinchgut Island ... ..			
Dawes' Battery ... ..	} Colonial Government ...	0 1 0	0 1 0
Victoria Barracks ... ..			
Brigade Major's Quarters ... ..			
TOTAL .....		£	0 3 0

PERCIVAL WILKINSON,  
Deputy Storekeeper.

THE HONORABLE  
THE COLONIAL SECRETARY.

Office of Ordnance,  
Sydney, 26 March, 1856.

A RETURN of all Lands, Messuages, Tenements, and Buildings, vested in the Principal Officers of Her Majesty's Ordnance, in the Colony of New South Wales, pursuant to the provisions of the Act of Council, 4th Victoria, No. 2.

DESCRIPTION OF PROPERTY.	CONTENTS OF LAND.			WHERE SITUATED.			DATE OF DEEDS OF GRANT.	PURPOSES FOR WHICH AUTHORIZED.
	A.	R.	P.	PARISH.	TOWN.	COUNTY.		
Part of Goat Island* .....	...	...	...	Petersham .....	.....	Cumberland .....	30th January, 1844	Magazine and Stores.
Land .....	1	2	34	North Brisbane .....	North Brisbane .....	Stanley .....	21st July, 1843.....	} Sites for Military Buildings.
	0	1	9	St. Luke.....	Liverpool .....	Cumberland .....	4th August, 1843...	
	1	0	13	St. John.....	Parramatta.....	ditto .....	ditto .....	
	0	1	31½	ditto .....	ditto .....	ditto .....	ditto .....	
	0	3	39	St. Matthew .....	Windsor.....	ditto .....	ditto .....	
	0	0	16	St. Phillip .....	Sydney .....	ditto .....	30th January, 1844..	
Pinchgut Island.....	...	...	...	Alexandria.....	.....	ditto .....	ditto .....	} For Defences of the Harbour.
Land on which Dawcs' Battery is erected.....	7	2	11	St. Phillip .....	Sydney .....	ditto .....	31st July, 1844.....	
Land .....	14	3	24	Bathurst .....	Bathurst.....	Bathurst .....	18th December, 1844	} For Military purposes. } Sites for Military Barracks.
	7	1	18	St. John.....	Parramatta.....	Cumberland .....	30th January, 1846..	
	16	1	25	Newcastle .....	Newcastle .....	Northumberland ..	5th January, 1847..	
	29	2	17	Alexandria.....	.....	Cumberland .....	31st July, 1850.....	

The whole of the above, with exception of Goat Island, are leased to the Colonial Government, under authority of the Board of Ordnance, 23rd January, 1850,  $\frac{5}{4}$ THE HONORABLE  
THE COLONIAL SECRETARY.PERCIVAL WILKINSON,  
Deputy Storekeeper.



1856.

NEW SOUTH WALES.

MORETON BAY.

(SEPARATION FROM NEW SOUTH WALES.)

Ordered by the Legislative Assembly to be Printed, 8 August, 1856.

RETURN to an Order of the Honorable the Legislative Assembly, dated 7 August, 1856, for—

“ All Despatches received by His Excellency from the Right Honorable the Secretary of State for the Colonies, relative to the separation of the Northern from the Middle Districts of the Colony of New South Wales, together with Copies of all Correspondence from His Excellency the Governor General to the Right Honorable the Secretary of State for the Colonies, on the same subject.”

SCHEDULE.

PAGE.

- 1. Lord John Russell to Governor General, 20 May, 1855, requiring a report as to the expediency of separating the Moreton Bay District from New South Wales .....
2. Governor General to Lord John Russell, 18 October, 1855, in reply ..... 2
3. Mr. Secretary Labouchere to Governor General, 4 February, 1856, intimating that no measures for the separation of the above District from New South Wales would be adopted ..... 3
4. Colonial Secretary to Government Resident, Brisbane, transmitting copy of above Despatch .. 3

## MORETON BAY.

(SEPARATION FROM NEW SOUTH WALES.)

—o—  
No. 1.

**MEMO.** :—Lord John Russell's Despatch cannot be traced. It was a brief Despatch, merely inviting the Governor General to report upon the expediency of separating Moreton Bay from the remainder of the Colony, and establishing a separate Government therein, as quoted in His Excellency's Despatch of 18 October, 1855.

No. 2.

THE GOVERNOR GENERAL to LORD JOHN RUSSELL.

(Copy.) No. 168.

*Government House,  
Sydney, 18 October, 1855.*

MY LORD,

I have the honor to acknowledge the receipt of your Lordship's Despatch, No. 20, dated 23 May, 1855, in which I am directed to state my opinion, as to the expediency of separating the Moreton Bay District from New South Wales, and establishing therein a separate Government.

2. I have looked over the former correspondence with relation to the proposed scheme of separation, by which it would appear, that the expediency of such a step was first advocated by the inhabitants of the Northern Districts, principally with the view of inducing the Government to send a supply of convict labor to that part of the Colony. It is true that this was objected to by a portion of the population, but still it formed the main feature in most of the Petitions; and I am, therefore, I think justified in expressing my belief that the large squatters were the persons whose interests were most consulted in the matter. In the later Petitions, the question of the continuance of transportation has been omitted; the policy of the Home Government having been too clearly explained as regards it, to allow of any hope that convicts would be sent to Moreton Bay, even were it made a separate Colony; but the persons who petition are the same; with the addition, perhaps, of the trading population of the towns of Brisbane and Ipswich. To these, the prospect of a large local expenditure is probably the inducement which has caused them to apply for separation from New South Wales.

3. I will now lay before your Lordship, an outline of the condition of the District, to which it is proposed to give a separate Government, with a Legislature composed of two Houses, a separate Judicial Establishment, &c., &c. If the thirtieth degree of latitude is to be taken as the boundary between New South Wales and Moreton Bay, then the area of the country to the north of that parallel may be taken at 206,000 square miles, or 132,000,000 acres. Of this, about 35,000 acres have been alienated by the Crown, and about 20,000 acres more have been claimed, under the pre-emptive right, by squatters.

The land occupied for pastoral purposes, by squatters, amounts to about 25,000,000 acres, for which a rent or license fee of £13,608 13s. is paid. The number of these squatters is 420, of whom only 56 have expressed an intention of exercising their pre-emptive right. It would seem, then, by this, that the principal occupants of land in this district of the Colony have not shown any disposition to become permanent holders of property, or to identify themselves in any way with the Colony. They are, in point of fact, producers of wool on a large scale; but their outlay of capital on the land has been very small indeed, and the improvements made by them are but trifling. Indeed, it is not likely that a man who has no interest in the land would be tempted to expend money upon permanent improvements. The population scattered over this large extent of country, does not, on a liberal estimate, exceed 19,000, or one person to 6,600 acres; and of these 19,000, a large proportion must, of course, be shepherds and others connected with the squatting establishments; for, according to the Returns for 1854, the quantity of Stock in these Districts amounted to 11,396 horses, 311,575 head of cattle, and 2,521,681 sheep, the superintendence of which must have required a great number of men.

Under

Under any arrangement of the Electoral Districts, or any distribution of the franchise, it is evident that the powers of the Government (should a separation take place) would, in the Moreton Bay District, be vested, in great measure, in the hands of men having little or no permanent interest in the country. I may also observe, that as the Australian Land Sales Act is probably by this time repealed, and the control of the Crown Lands placed in the hands of the Legislature, the separation of the Moreton Bay District from New South Wales, would place in the hands of a very small number of people the control over the whole capital of the Colony.

4. Looking, therefore, to the present condition of the districts to the north of the parallel of 30° of latitude, and to the probability that some kind of municipal organization will be introduced, by which most of the benefits of a distinct and separate Government will be conceded to the people, without entailing upon them the expensive machinery of a distinct Government, I must say, that I consider a separation of the District of Moreton Bay from New South Wales would, at all events at present, be both inexpedient and unwise.

I have, &c.,

(Signed) W. DENISON.

THE RIGHT HONORABLE  
LORD JOHN RUSSELL.

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No. 3.

MR. SECRETARY LABOUCHERE to THE GOVERNOR GENERAL.

(Copy.)  
No. 18.

*Downing-street,*  
4 February, 1856.

SIR,

I have received your Despatch No. 168, of the 18th October last, on the subject of the separation of the Moreton Bay District from New South Wales, and of the establishment of a separate Government in that Province.

In consequence of the decided opinion which you have expressed, as to the inexpediency of such a separation in the existing state of that District, I shall abstain, for the present, from the adoption of any measures for that purpose; and you will inform those parties who are interested in the question, that such is the decision of Her Majesty's Government.

I have, &c.,

(Signed) H. LABOUCHERE.

GOVERNOR SIR W. DENISON,  
&c., &c., &c.

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No. 4.

COLONIAL SECRETARY to GOVERNMENT RESIDENT, BRISBANE.

(Copy.)  
M. 237-B. 113.

*Colonial Secretary's Office,*  
Sydney, 4 June, 1856.

SIR,

I am directed by His Excellency the Governor General to transmit to you a Copy of a Despatch which has been received from the Secretary of State for the Colonies, on the subject of the separation of the Moreton Bay District from New South Wales; and to request, that you will inform the Petitioners for separation of the decision of Her Majesty's Government. 4 Feb., 1856,  
annexed.

I have, &c.,

(Signed) E. DEAS THOMSON.

THE GOVERNMENT RESIDENT,  
Brisbane.

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1856.

## NEW SOUTH WALES.

## SEPARATION OF NORTHERN DISTRICTS.

*Ordered by the Legislative Assembly to be Printed, 28 October, 1856.*

W. DENISON,

*Governor General.**Message No. 4.*

The Governor General lays before the Legislative Assembly a Despatch with which he has been honored by the Secretary of State, in which the views of Her Majesty's Government with reference to the establishment of a separate Colony, to be formed out of the Northern Districts of New South Wales, are explained.

*Government House,**Sydney, 28 October, 1856.*[*Enclosure.*]

No. 90.

*Downing-street,  
21 July, 1856.*

SIR,

With reference to Correspondence which has passed between this Department and Sir Charles Fitz Roy, and yourself, respecting the projected separation of the Northern Districts of the Colony of New South Wales, and their erection into a distinct Colony, I have now to inform you, that Her Majesty's Government have determined that the time has arrived when this separation would be desirable.

They have not failed to give their fullest attention to the arguments adduced by yourself, as well as Sir Charles Fitz Roy, against this determination. But they feel that those arguments rest on premises which are every day more and more set aside by the progress of events. And, on the whole, they believe that it is better to run the risk of forming into a Colony a community as yet, in some respects, immature, but rapidly advancing to maturity, than of letting the partial difficulties of separation, and the ill feeling which the present state of things is calculated to engender, grow stronger from day to day.

In addition to these views of their own, they have been urged by the strong and repeated representations of parties possessing the confidence of the Inhabitants of the Northern Districts, and also by statements directly proceeding from what they believe to be the majority of the Inhabitants of the Northern Districts; they feel also the more bound to entertain this question, from the circumstance that the Legislative Council of New South Wales, by virtue of the proviso contained in the 46th section of the New South Wales Government Act, have given their sanction to the principle that the period at which the separation is to take place is to be left to the decision of the Crown.

The following are the most important questions, as it occurs to me, which remain to be decided.

1. The boundary between the two future Provinces.—On this point I have had the valuable assistance of a memorandum drawn up by Mr. Deas Thomson when in England, as well as of the statements of gentlemen interested in the Northern Provinces. With the materials thus before them, Her Majesty's Government will have no great difficulty in fixing on a line which will run not far to the south of 30° S. latitude, but will be accommodated to suit the natural features of the country.

2. The future Government of the separated portion.—The necessary powers for this purpose have been conferred on Her Majesty by the Act of Parliament enabling Her to confirm the New South Wales Bill, and I shall address you further on the subject on another occasion.

3. The division of the Debt of the Province.—I am in correspondence with the Law Advisers of the Crown on the subject of the legal method by which this division may be effected. But whatever their opinion on this point may be, there can be no doubt that the basis of arrangement should be an equitable division according to the several contributions to the Revenue of the two portions, and the benefits which they respectively derived or expected from the public services to which the Loans thus contracted were appropriated. On this subject especially I am anxious to receive, as soon as practicable, a Report from yourself, with the advice of your Council.

I have, &c.,

H. LABOUCHERE.

GOVERNOR SIR WILLIAM DENISON,  
&c.,            &c.,            &c.

1856-7.

## NEW SOUTH WALES.

*Legislative Assembly.*

## SEPARATION OF THE NORTHERN DISTRICTS.

*Ordered by the Legislative Assembly to be Printed, 18 February, 1857.*

To the Honorable the Legislative Assembly of New South Wales.

The humble Petition of the undersigned inhabitants of New England, in the Colony of New South Wales,—

SHEWETH:—

That we, the undersigned residents in the Crown Lands District of New England, beg to draw the attention of your Honorable Assembly to certain particulars contained in a Despatch recently received by His Excellency the Governor General from the Secretary of State for the Colonies, bearing date the 21st day of July, 1856, and numbered 90, having reference to the separation of certain Northern Districts from the Colony of New South Wales, and the erection of them into a projected new Colony, wherein, amongst other particulars, it is stated that certain views therein expressed had been urged by the strong and repeated representations of parties possessing the confidence of the inhabitants of the Northern Districts, and also by the statement directly proceeding from what they believe to be the majority of the inhabitants of the Northern Districts; and that, with certain material before them, Her Majesty's Government would have no great difficulty in fixing on a line which would run *not far to the south* of the 30th degree of south latitude, but would be accommodated to suit the natural features of the country,—your Petitioners desire urgently, but respectfully, to represent, through the medium of your Honorable Assembly, that, so far as the inhabitants of the New England District are concerned, they never deputed any person or persons whomsoever to represent any such views as those mentioned in the Despatch above referred to, nor did any such expression emanate from the inhabitants of the District, or a majority of them.

That your Petitioners whilst they can offer no objection to certain of the Northern Districts being erected into a separate Colony, firmly, but respectfully protest against any portion of the Crown Lands District of New England being included in such Colony, and upon the following grounds, viz. :—

- 1st. That the combined interests of the New England District, commercial and otherwise, are intimately connected with and attached to the Colony of New South Wales, and must remain so, independent of political changes, and that the inhabitants of the said District of New England have no interest now, and do not desire to have any future interest in the projected new Colony to the northward.
- 2nd. That should the 30th parallel of south latitude be constituted the boundary between the present Colony of New South Wales and the projected new Colony to be erected to the northward, or any other line approaching thereunto, such a boundary would not only cause great public inconvenience, but would materially affect private property to the great injury of the proprietors, by, in many instances, dividing the runs of lessees of the Crown, and whilst

one portion would remain in the Colony of New South Wales, the corresponding portion would become subject to the laws of the projected Colony, thereby completely dividing private interests, and rendering individuals subject to the laws of the two distinct Colonies, and liable to the revenue of taxes of each.

3rd. And, lastly, your Petitioners, conceiving that some regard ought to be had to the choice of a people as to the Government under which they would desire to live, humbly beg, finally to urge upon Her Majesty's Government, through the medium of your Honorable Assembly, as aforesaid,

That any alteration in the natural boundary of New England, as it at present exists, would be fraught with great public inconvenience—would materially affect private interests, and would tend to disseminate and perpetuate disagreement, discontent, and disunion amongst a very large proportion of Her Majesty's most loyal and devoted subjects in this portion of Her Majesty's Australian Possessions, and would be directly opposed to the wishes and desire of your Petitioners.

Your Petitioners now leave the subject of their prayer in the hands of your Honorable House, in the full confidence that it will receive such a measure of support as they conceive the justice of the demand entitles it to obtain.

And your Petitioners, as in duty bound, will pray.

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1856.

NEW SOUTH WALES.

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# MORETON BAY.

(PORT OF SHIPMENT.)

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*Ordered by the Legislative Assembly to be Printed, 4 November, 1856.*

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To the Honorable the Legislative Assembly of New South Wales, &c., &c., &c.

The Petition of the undersigned Freeholders of land in the Town of Cleveland, and otherwise interested in the welfare of Moreton Bay and adjoining Districts,—

RESPECTFULLY SHEWETH:—

That whereas, about the year one thousand eight hundred and fifty, it having appeared to your Petitioners that the increasing population and importance of these districts called for the speedy establishment of a port of direct shipment in Moreton Bay, and that from the natural impediments existing to the navigation of the River Brisbane, many years and great expenditure would be required to render the said river fit to receive vessels even of moderate draught of water, your Petitioners, after much private enquiry and research, applied for land to be put up for sale at Cleveland Point, on the shores of Moreton Bay, as the spot the best suited for the purpose, and also applied for and received from the Government encouragement and assistance to proceed in the undertaking immediately.

That, relying on the promise of such assistance being continued, your Petitioners purchased land largely in the Town and Suburbs of Cleveland, and, in some instances, erected extensive buildings, with a view to carrying on business at the proposed port.

That, in the close of the year one thousand eight hundred and fifty-four, after the expenditure of a portion of the first sum voted for a Jetty at Cleveland, the Legislative Council objected to voting any further sum without an official survey of Moreton Bay being obtained, so as to enable the Council to judge of the respective merits of the sites contemplated for the port of the District, and that the works commenced were, in consequence, to the great detriment of the District, suddenly and unavoidably discontinued.

That, to an application by letter from the Cleveland Jetty Committee to His Excellency Sir William Denison, dated the        day of        one thousand eight hundred and fifty       , praying him to decide in the matter, an answer was returned to the effect, that the survey of the waters of the Bay would be undertaken shortly, and that His Excellency proposed to visit the Northern Districts before long in person, and would decide on the matter.

That no such survey has taken place, as appears to be contemplated, and no other steps have as yet been taken to set the matter at rest, while it appears to be contemplated to attempt the removal of the obstructions at the mouth of the River Brisbane—an operation, the success of which is, at best, questionable; while it is certain that many years must elapse, and an enormous expenditure of public money be incurred, before even one of the sandbanks, several of which exist, can be made passable for vessels drawing more than ten feet of water.

That your Petitioners beg to point out that a large portion, if not the whole, of the land on the shores and islands of the southern portion of Moreton Bay is of the most fertile description, and being adapted in the highest degree to the cultivation of cotton, is about to be applied for immediately to be put up for sale, and your Petitioners would, therefore, most respectfully urge this as an additional motive for the necessity of an immediate official survey of the waters in the vicinity of the said lands.

Your Petitioners, therefore, most respectfully pray, that a full and accurate survey of the waters of Moreton Bay be at once instituted, together with an enquiry into the respective merits, and probable comparative expenditure of the public funds, on the several sites contemplated as ports of shipment, in order that your Honorable House may be put in possession of such information as will enable your Honorable House to decide on the most advantageous disposition of the public funds.

And your Petitioners, as in duty bound, will ever pray, &c., &c., &c.

*[Here follow 18 Signatures.]*

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1856.

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*Legislative Assembly.*NEW SOUTH WALES.  
.....**REPORT**

FROM

**THE SELECT COMMITTEE**

ON THE

**LIVERPOOL AND LONDON FIRE AND LIFE  
INSURANCE COMPANY'S BILL;**

TOGETHER WITH THE

**PROCEEDINGS OF THE COMMITTEE**

AND

**MINUTES OF EVIDENCE.**

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*ORDERED* BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,  
3 *December*, 1856.

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**SYDNEY:**  
PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP STREET.

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1856.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

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VOTES No 45. TUESDAY, 18 NOVEMBER, 1856.

15. Liverpool and London Fire and Life Insurance Company's Bill:—Mr. Cowper moved, pursuant to notice,—
- (1.) That the Liverpool and London Fire and Life Insurance Company's Bill be referred for the consideration and report of a Select Committee.
- (2.) That such Committee consist of Mr. Arnold, Mr. John Campbell, Mr. Gordon, Mr. F. T. Rusden, Mr. Scott, Mr. Weekes, and the Mover.
- Question—(1.) That the Liverpool and London Fire and Life Insurance Company's Bill be referred for the consideration and report of a Select Committee—put and passed.
- Question—(2.) That such Committee consist of Mr. Arnold, Mr. John Campbell, Mr. Gordon, Mr. F. T. Rusden, Mr. Scott, Mr. Weekes, and the Mover—put and passed.
- 

VOTES No. 53. WEDNESDAY, 3 DECEMBER, 1856.

4. Liverpool and London Fire and Life Insurance Company's Bill:—
- (1.) Mr. Cowper, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 18th ultimo.
- Ordered to be printed,—
- (2.) Whereupon, on motion of Mr. Cowper, the second reading of this Bill ordered to stand an Order of the Day for Tuesday next.
- 

REPORT

1856.

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**NEW SOUTH WALES.**

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**LIVERPOOL AND LONDON FIRE AND LIFE INSURANCE COMPANY'S BILL.**

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**REPORT.**

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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and Report was referred, on the 18th November last, the "*Liverpool and London Fire and Life Insurance Company's Bill*," beg leave to Report to your Honorable House—

That they examined Mr. A. S. Leathes, the Resident Secretary of the Company, (whose Evidence will be found appended hereto,) and that the Preamble of the Bill having been satisfactorily proved by the Evidence of that gentleman, they proceeded with its several Clauses and the Schedule referred to therein, in the consideration of which they found it necessary to make an amendment in the *Second* Clause, and to strike out the *Fifth* Clause of the Bill; and your Committee now beg to lay before your Honorable House the Bill, as amended by them.

**CHARLES COWPER,***Chairman.*

*Legislative Assembly Chamber,  
Sydney, 2 December, 1856.*

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**PROCEEDINGS**

PROCEEDINGS OF THE COMMITTEE.

WEDNESDAY, 26 NOVEMBER, 1856.

Members Present:—

Mr. Cowper, | Mr. J. Campbell,  
Mr. Scott.

Mr. Cowper was called to the Chair.

Mr. William Barker appeared as Solicitor for the Bill.

Mr. A. S. Leathes, Resident Secretary of the Company, Examined.

The Committee being of opinion, that the Preamble was satisfactorily proved by the Evidence of Mr. Leathes;—

Motion made and Question—"That the Preamble stand part of the Bill"—agreed to.

Clause I. read by the Chairman, and agreed to without amendment.

Clause II. read by the Chairman—

Motion made and Question—"That the Clause be amended by the addition of the " words ' or in his absence ' at the end of line 11 on page 4 of the Bill," agreed to.

Clauses III. and IV. read by the Chairman, and agreed to, without amendment.

Clause V. read by the Chairman—

Committee deliberated as to the expediency of retaining this Clause in the Bill, and it was resolved to expunge the same therefrom.

Clause V. struck out accordingly.

The Schedule referred to in the Bill then read by the Chairman, and agreed to without amendment,—

Whereupon Committee agreed to Report the Bill as amended.

WITNESS.

PAGE.

Mr. A. S. Leathes..... 5

1856.

## LEGISLATIVE ASSEMBLY.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

## LIVERPOOL AND LONDON FIRE AND LIFE INSURANCE COMPANY'S BILL.

WEDNESDAY, 26 NOVEMBER, 1856.

Present:—

MR. JOHN CAMPBELL, | MR. COWPER,

~~MR. SCOTT.~~

CHARLES COWPER, ESQ., IN THE CHAIR.

Wm. Barker, Esquire, appeared as Solicitor for the Bill.

Alfred Stanger Leathes, Esquire, called in and examined:—

1. *By Mr. Barker:* You are the Resident Secretary of the Liverpool and London Fire and Life Insurance Company? Yes. A. S. Leathes,  
Esq.  
26 Nov., 1856.
2. When was that Company established? The original Company, called the Liverpool Fire and Life Insurance Company, was established in May, 1836.
3. For what purpose? "For the purposes of making and effecting Insurances on houses, warehouses, and buildings, shipping in Port, goods, wares, merchandize, farming stock, utensils, and property of all descriptions, against loss or damage by fire; insurances on lives and survivor ships, the sale and purchase of annuities, reversions, and contingent interests, and the endowment of children, and generally to carry on the business usually called or known as Fire and Life Insurance, and all matters connected therewith."
4. Was there a Deed of Settlement made on the establishment of the Company? Yes.
5. What was the date of that Deed? 21st May, 1836.
6. Do you produce a copy of the Imperial Act of Parliament, passed in the eleventh year of Her Majesty's Reign, for the purpose of changing the name of the Company from the "Liverpool Fire and Life Insurance Company," to the "Liverpool and London Fire and Life Insurance Company"? I do. (*The witness handed in the same.*)
7. Was there a Supplementary Deed of Settlement afterwards made? Yes.
8. That is dated 28th February, 1851? Yes.
9. Do you produce a copy of that Supplementary Deed? I do. (*The witness handed in the same.*)
10. Will you be good enough to refer to the third clause of the Supplementary Deed. By that clause power is given to the Board of Direction, for the time being, to appoint Local Boards in any Colony or Possession of the United Kingdom? Yes.
11. Refer to the eighth clause, if you please. Does that clause give power to the Board of Direction to delegate to these Local Boards the necessary powers for carrying on the business of the Company? Yes.
12. And to appoint them by Power of Attorney? It does.
13. The ninth clause in the Supplemental Deed declares that investments to be made by the Local Boards shall be made in the names of three Trustees, who shall be residents in the Colony? Yes.
14. Have the Board of Direction in England appointed a Local Board in this Colony? Yes.
15. Can you state the names of the present Members of this Local Board? Edward Knox (Chairman), Joseph Scaife Willis, George Kenyon Holden, and Daniel Cooper.
16. Of that Board three are Trustees of the Company? Yes; Mr. Willis, Mr. Knox, and Mr. Holden.
17. They are all residents in this Colony? Yes.
18. Are the lands belonging to the Company as mortgagees, or otherwise, now vested in these Trustees? All of them.

- S. A. Leathes, Esq.  
20 Nov., 1856.
19. Can you state whether, in consequence of the death, resignation, or departure from the Colony, of any of the Local Trustees, it has at any time been necessary to appoint new Trustees, and to transfer the mortgages and other securities of the Company from one set to the other? Yes; on the occasion of Sir Charles Nicholson leaving the Colony, Mr. Knox was appointed in his place; and on Mr. Walker's leaving, Mr. Holden was appointed.
20. And on that account it became necessary to transfer the mortgages to the new Trustees? Yes; twenty-three of them were transferred.
21. Has the Company any considerable amount invested in this Colony? £135,000.
22. The transfer of this property to new Trustees has been the occasion of considerable expense? Yes; it costs us about £300 each time, and, of course, as our business increases the cost of these transfers will increase, because for every mortgage there is a separate Deed, so as not to complicate the titles of the mortgagors.
23. Have you any considerable portion of the £135,000 invested in land? £107,000.
24. In mortgages, on land and buildings? Yes.
25. In the buildings I suppose you include the Offices of the Company? Yes.
26. You propose to get rid of this complication and expense by investing the money, securities, and property of the Company, in the Trustees for the time being, without requiring the same to be assigned? Yes. The Company have been advised that this cannot be effected without the aid and authority of the Legislature.
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1856.

Legislative Assembly.  
NEW SOUTH WALES.

# REPORT

FROM

THE SELECT COMMITTEE

ON THE

AUSTRALIAN GENERAL ASSURANCE  
COMPANY'S BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE.

AND

MINUTES OF EVIDENCE.

---

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,  
9 December, 1856.

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**Sydney :**

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
HYDE PARK.

1856.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

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VOTES No. 46. WEDNESDAY, 19 NOVEMBER, 1856.

20. Australian General Assurance Company's Bill:—Mr. Manning moved, pursuant to *amended* notice,—
- (1.) That the Australian General Assurance Company's Bill be referred for the consideration and report of a Select Committee.
- (2.) That such Committee consist of Mr. Barker, Mr. Gordon, Mr. Irving, Mr. Macarthur, Mr. Sandeman, and the Mover.
- Question (1)—That the Australian General Assurance Company's Bill be referred to the consideration and report of a Select Committee—put and passed.
- Question (2)—That such Committee consist of Mr. Barker, Mr. Gordon, Mr. Irving, Mr. Macarthur, Mr. Sandeman, and the Mover—put and passed.
- 

VOTES No. 56. TUESDAY, 9 DECEMBER, 1856.

9. Australian General Assurance Company's Bill:—
- (1.) Mr. Manning, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 19th ultimo.
- Ordered to be printed.
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REPORT

1856.

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NEW SOUTH WALES.

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AUSTRALIAN GENERAL ASSURANCE COMPANY'S BILL.

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REPORT.

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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and Report was referred, on the 19th November last, the "*Australian General Assurance Company's Bill*," beg leave to Report to your Honorable House—

That they examined the Solicitor for the Bill, and the Secretary to the Company, (whose evidence will be found appended hereto) and that the Preamble having been satisfactorily proved by the evidence of those gentlemen, they proceeded with the several Clauses of the Bill, in none of which did they find it necessary to make any amendment; and your Committee now beg to lay before your Honorable House the said Bill, without amendment.

W. M. MANNING,  
*Chairman.*

*Legislative Assembly Chamber,*  
9 December, 1856.

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PROCEEDING

PROCEEDINGS OF THE COMMITTEE.

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**Members Present :—**

Mr. Manning,		Mr. Irving,
Mr. Barker,		Mr. Macarthur.

Mr. Manning was called to the Chair.

Solicitors for the Bill, Messrs. *Holden and M'Carthy*.

Mr. *W. G. M'Carthy*, *Solicitor*, and Mr. *J. D. Gibson*, *Secretary to the Company*, examined.

Committee being of opinion that the Preamble of the Bill was satisfactorily proved by the Evidence of those gentlemen ;—

Motion made and *Question*—"That this Preamble stand part of the Bill"—*agreed to*.  
 Clauses I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, and XVI, read by the Chairman, and agreed to without amendment.

Committee agreed to report the Bill, without amendment.

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WITNESSES.

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1856.

LEGISLATIVE ASSEMBLY.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

## AUSTRALIAN GENERAL ASSURANCE COMPANY'S BILL.

WEDNESDAY, 3 DECEMBER, 1856.

Present :

MR. MANNING,  
MR. MACARTHUR,MR. IRVING,  
MR. BARKER.

W. M. MANNING, ESQ., IN THE CHAIR.

Mr. W. G. M'Carthy appeared as Solicitor for the Bill, and was examined as follows :—

1. *By the Chairman* : Do you produce all notices published according to the Standing Orders, or in anticipation of them? Yes; I produce the *Gazette* and Newspapers. Mr. W. G. M'Carthy.
2. Do you produce the Deeds of Settlement of this Company? Yes.
3. The Deed of 1836, which established the Company under the name of the "Australian Fire and Life Assurance Company"? Yes; that Deed is dated the 20th May, 1836. Dec., 1856.
4. Was the Company carried on under that Deed until the year 1839? Yes, it was.
5. Do you produce the Supplementary Deed, of March, 1839? Yes; that is dated the 6th of March, 1839.
6. By which, among other things, the business of Marine Assurance was added? Yes.
7. And the title of the Company was altered? Yes, to that of the "Australian General Assurance Company."
8. *By Mr. Irving* : Is the Supplementary Deed attached to the Original Deed? Yes.
9. *By the Chairman* : Have all the present Shareholders signed the Supplementary Deed? Yes.
10. Has the business been carried on until the present time under the two Deeds together? Yes.
11. Is it one of the principles of the Association that there should be unlimited liability on the part of each Shareholder? Yes; it is so stated in the Deed.
12. Are the Shareholders willing to continue that liability? Mr. Gibson, the Secretary, said he put it to the Board of Directors, and they did not think it necessary to make any alteration.
13. With respect to unlimited liabilities, is the Company desirous of being incorporated under the provisions of this Bill? Yes; but I cannot say that of my own knowledge. I would prefer your taking Mr Gibson's evidence, as he has been in direct communication with the Board of Directors.

Mr. J. D. Gibson examined—

1. *By the Chairman* : What is your name? John Dickson Gibson. Mr. J. D. Gibson.
2. You are the Secretary to the Company? I am.
3. Is the Company desirous of being incorporated as stated in the Preamble, retaining, at the same time, unlimited liability, according to the terms of the Deed of Settlement? Yes. Dec., 1856.
4. And being incorporated according to the provisions of the Bill? Yes.



1857.

NEW SOUTH WALES.

Legislative Assembly.

AUSTRALIAN MUTUAL PROVIDENT SOCIETY'S BILL.

**REPORT**

FROM

THE SELECT COMMITTEE

ON THE

AUSTRALIAN MUTUAL PROVIDENT SOCIETY'S BILL;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

---

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,  
10 February, 1857.

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Sydney :

PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

1857.

377—A

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

---

VOTES No. 59. FRIDAY, 12 DECEMBER, 1856.

7. Australian Mutual Provident Society's Bill:—Mr. Plunkett moved, pursuant to notice,—
- (1.) That the Bill "To Incorporate the Australian Mutual Provident Society" be referred to a Select Committee.
- (2.) That such Committee consist of Mr. Macarthur, Mr. Cox, Mr. Lang, Mr. Jones, Mr. Gordon, Mr. Thomson, Mr. Barker, Mr. Sandeman, and Mr. Osborne.
- Question—(1) That the Bill "To Incorporate the Australian Mutual Provident Society" be referred to a Select Committee,—put and passed.
- Question—(2) That such Committee consist of Mr. Macarthur, Mr. Cox, Mr. Lang, Mr. Jones, Mr. Gordon, Mr. Thomson, Mr. Barker, Mr. Sandeman, and Mr. Osborne,—put and passed.
- 

VOTES No. 86. TUESDAY, 10 FEBRUARY, 1857.

10. Australian Mutual Provident Society's Bill:—
- (1.) Mr. Jones, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 12th December last.
- Ordered to be printed.
- (2.) Mr. Jones then moved, That the second reading of this Bill stand an Order of the Day for Friday next.
- Question put and passed.
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1857.  

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AUSTRALIAN MUTUAL PROVIDENT SOCIETY'S BILL.  

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**REPORT.**  

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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred, on the 12th December last, the "*Australian Mutual Provident Society's Bill*," beg leave to report to your Honorable House—

That they examined the Solicitor for the Bill and the Secretary of the Society, (whose Evidence will be found appended hereto,) and that the Preamble of the Bill having been satisfactorily proved by the Evidence of those gentlemen, they proceeded with its several Clauses, in the consideration of which they found it necessary to add, at the end of the *Twenty-second* Clause, a Proviso rendering it compulsory on the part of the Society to record the names of their Secretary and Directors in the Registrar General's Office, and at the end of the *Twenty-third* Clause, a Proviso enabling any Member of the Society, in the event of its amalgamating with any other Society or Company, who may dissent from such amalgamation, to realise the amount of his Policy; and your Committee now beg to lay before your Honorable House the Bill as amended by them.

R. JONES,  
Chairman.

*Legislative Assembly Chamber,*  
10 February, 1857.

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PROCEEDINGS OF THE COMMITTEE

FRIDAY, 9 JANUARY, 1857.

**Members Present:—**

Mr. Plunkett,		Mr. Macarthur,
Mr. Cox,		Mr. Jones,
	Mr. Sandeman.	

Mr. Plunkett was called to the Chair.

Solicitor for the Bill, Mr. *M. C. Stephen*.

Mr. *M. C. Stephen*, Solicitor, and Mr. *R. Thompson*, Secretary to the Society, examined.

Committee considered the Preamble of the Bill, and made the following amendments therein:—

Page 3, Line 15,—omit *this present*.

” ” —after *assembled* insert *and by the authority of the same*.

Whereupon Committee being of opinion that the evidence of the witnesses shewed the matters required by the Standing Orders to have been complied with, and the allegations contained in the Preamble to be proved:—

Motion made, and *Question*—“That the Preamble, as verbally amended, stand part of the Bill”—*agreed to*.

Committee then proceeded to consider the several Clauses of the Bill.

Clauses 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 16, 17, and 23, as far as the word *speed*, in page 12, line 24, read and agreed to without amendment.

Clauses 12, 13, 14, 18, 19, 20, 21, 22, and the remainder of 23, after the word *speed*, in page 12, line 24, read and *postponed*,—

Committee being of opinion that it would not be expedient to agree to these Clauses until some explanation had been given with respect to certain matters contained therein.

Committee then deliberated as to the advisability of inserting at the end of Clause 22 a proviso, requiring the names of the Secretary and Directors of the Society to be registered in the office for the Registry of Deeds; and in the event of any change occurring in such Secretary or Directors requiring like registration, and at the same time notification thereof in the *Government Gazette*; and considered that it would be advisable to add a proviso to this effect at the end of said Clause.

[Adjourned till Wednesday next, at Eleven o'clock.]

WEDNESDAY, 14 JANUARY, 1857.

**Member Present:—**

Mr. Plunkett.

A Quorum of the Committee not being present,

[Adjourned till Tuesday next, at Eleven o'clock.]

TUESDAY, 20 JANUARY, 1857.

**Members Present:—**

Mr. Jones,		Mr. Lang.
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A Quorum of the Committee not being present,

[Adjourned till Thursday, 5 February, at Eleven o'clock.]

THURSDAY, 5 FEBRUARY, 1857.

**Member Present:—**

Mr. Jones.

A Quorum of the Committee not being present,

[Adjourned till Tuesday next, at Twelve o'clock.]

TUESDAY,

TUESDAY, 10 FEBRUARY, 1857.

Members Present:—

Mr. Jones, Mr. Gordon, Mr. Thomson,

The Chairman's (Mr. Plunkett) seat in the House having been declared vacant, Mr. Jones was called to the Chair.

The Clerk, by direction of the Chairman, read the Minutes of Proceedings taken at the former Meeting of the Committee.

Mr. A. T. Holroyd, a Director of the Society, was in attendance, and explained certain matters contained in the Clauses postponed by the Committee, on the 9th ultimo.

Whereupon Clauses 12, 13, 14, 18, 19, 20, 21, then postponed, again read, further considered, and agreed to without amendment.

Clause 22, then postponed, again read.

Motion made and Question—"That this Clause be amended by the addition of the following words at the end thereof, 'and the place where the said office is situate, and the names of the Secretary and Directors of the Society shall be registered in the office for the Registry of Deeds, in like manner as hereinbefore declared respecting the bye-laws; and every change in such office, and every new appointment of Secretary or Director, shall forthwith be also registered in like manner, and notice thereof given in the Government Gazette'"—agreed to.

Words added accordingly.

Clause, as amended, agreed to.

Clause 23—after word speed, in Page 12, Line 24—then postponed, again read.

Motion made and Question—"That this Clause be amended by the addition of the following words at the end thereof: 'But in the event of any member, who may not have assented to such disposal, amalgamation, or transfer, at the meeting at which the same was confirmed, dissenting therefrom at any time before the date on which his annual premium, next after the date of such meeting, shall have become due, or if he have no annual premium to pay, then within twelve calendar months after the date of such meeting he shall be entitled to demand from the funds of whatever Branch of the said Society he may be a member of the value of his Policy, and the same shall be paid to him accordingly on his surrendering such Policy'"—agreed to.

Words added accordingly.

Clause, as amended, agreed to.

Chairman requested to Report the Bill, as amended, to the House.

LIST OF WITNESSES..

Friday, 9 January, 1857.

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LEGISLATIVE ASSEMBLY.

"AUSTRALIAN MUTUAL PROVIDENT SOCIETY'S BILL."

Amendments made in Select Committee.

Preamble. Page 3, Line 15.—Omit this present.

After assembled insert and by the authority of the same.

Clause 22. Page 12, Line 14.—At the end of Clause add, And the place where the said office is situate, and the names of the Secretary and Directors of the Society shall be registered in the office for the Registry of Deeds, in like manner as hereinbefore declared respecting the bye-laws; and every change in such Office, and every new appointment of Secretary or Director, shall forthwith be also registered in like manner, and notice thereof given in the Government Gazette.

23. Page 13, Line 10.—At the end of Clause add, But in the event of any member, who may not have assented to such disposal, amalgamation, or transfer, at the meeting at which the same was confirmed, dissenting therefrom at any time before the date on which his annual premium, next after the date of such meeting, shall have become due; or if he have no annual premium to pay, then within twelve calendar months after the date of such meeting he shall be entitled to demand from the funds, of whatever Branch of the said Society he may be a Member, of the value of his Policy, and the same shall be paid to him accordingly on his surrendering such Policy.

1857.

## NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

## THE SELECT COMMITTEE

ON THE

## AUSTRALIAN MUTUAL PROVIDENT SOCIETY'S BILL.

FRIDAY, 9 JANUARY, 1857.

Present:—

MR. COX,  
MR. JONES,MR. MACARTHUR,  
MR. PLUNKETT,

MR. SANDEMAN.

JOHN HUBERT PLUNKETT, ESQUIRE, IN THE CHAIR.

Montague Consett Stephen, Esquire, called in and examined:—

M. C. Stephen,  
Esq.

9 Jan., 1857.

1. *By the Chairman:* You are solicitor for the Australian Mutual Provident Society? I am.
2. There were certain Newspapers and Gazettes laid on the Table of the House, which were handed by you to me,—were notices of the intention of the Society to apply for this Bill published in all those Newspapers and Gazettes? They were. *The Empire, the Sydney Morning Herald, and the Gazette.*
3. What are the dates? I cannot exactly recollect. They were published in consecutive weeks.
4. Before the Standing Rules and Orders of the Assembly were adopted? Yes. The notice was not inserted in one of the *Gazettes*, although instructions were given to the *Gazette* to do so. Four insertions were paid for, but they only inserted the notice three times. It was a mistake of the Government Printer's. But it was in the newspapers for four consecutive weeks.
5. When was this Society established? It was first established some eight years ago, or longer.
6. Are you aware whether the Rules of the Society were certified and registered at the Quarter Sessions, under the Friendly Societies' Act? Yes.
7. That is the 7th Victoria, No. 10. Yes.
8. In what way does the 17th Victoria, No. 26, the present Friendly Societies' Act, which repeals the former one, affect the operations of this Society? It repeals the 7th Victoria, No. 10, entirely, except in so far as any Society which then exists; and it goes on to say that any future Rules must be enrolled under itself, so as to change from one Act to the other; but its provisions limit the business to be carried on by any such Society to assurances of £100, and annuities of £30, whereas the Society, before the passing of that Act, had assurances for £2,000, and annuities up to any amount, to which, according to our Rules, we can go.
9. Is there any limit by the present Rules of the Society? None whatever.
10. *By Mr. Cox:* Is it usual to have a limit? Directors sometimes fix a limit. I believe we have a limit fixed at £2,000 at present on a single life, but it is only a rule of the Directors.
11. It is not fixed by the Act? Not by the Act.
12. *By the Chairman:* Have you a copy of the present Rules of the Society? Yes. (*The witness handed in the same.*)
13. Are you aware whether the operation of the present Friendly Societies' Act, of the 17th Victoria, has restricted the business of the Society? It will do so if we have to file any fresh Rules. It excepts Societies already established under the former Act, but then it confers additional privileges on Societies to be established under itself, such as the holding of land, and one or two more. So long as we maintain our present Rules we remain under the first Act. It is the only Society established under the first Act.
14. Have you had occasion to make any alteration in the Rules? No, not yet; because we have been advised that if we did make any alteration we should be subject to these limitations.
15. Was any alteration necessary that you are aware of, if you had not been restricted by this Act from making it? No, except that it is very difficult to tell how to act under the first Act, the 7th Victoria, No. 10. It is very confused in some of its provisions. I do not know that we could not have gone on under it, except that we have no power to purchase land for offices, and so on.

16. You consider that any alteration at all made in your Rules, if it became necessary, would at once remove you from the benefit of the old Act? Yes.
17. And then confusion and embarrassment would arise? No doubt. There is another thing that has induced us to apply for this Bill. It is desired to extend the operation of the Society to the neighbouring Colonies, and we are unable to do that either under the one Act or the other—the 7th Victoria, No. 10, or the 17th Victoria, No. 26.
18. Does this Bill embody the present Rules and Regulations of the Society? It does, with some exceptions.
19. What are the exceptions? It embodies the whole of them until we pass fresh ones; that is to say, it says our present Rules shall be the Bye-laws of the Corporation until we make fresh ones; and one of the sections of this Bill compels us to have new Bye-laws within a certain time.
20. Which is that? The seventh section. You will see that the preceding section, the sixth, says that the present Rules shall be the Bye-laws until fresh Bye-laws are made.

M.C. Stephen  
Esq.

9 Jan., 1857.

Robert Thompson, Esquire, called in and examined:—

1. *By the Chairman:* What are you? I am Actuary and Secretary to the Australian Mutual Provident Society.
2. Can you furnish to the Committee a Prospectus of the Australian Mutual Provident Society, and the Rules and Regulations under which you act? You hold in your hand the Rules and Regulations. A copy of the Prospectus I have not with me.
3. Is it not here? The information contained in the Rules and Regulations amounts to a Prospectus.
4. How long has the Society been in existence? Since the first of January, 1849.
5. Can you give the Committee any idea of the extent of the business it has transacted? The amount at present at risk on assurances is about £320,000, and the present income, so far as I can say just now, is about £15,000 a year, probably more.
6. *By Mr. Cox:* What is the amount for which the Company is liable—of the fund subscribed—the capital? Being a Mutual Office there is no capital. Its funds consist of an accumulation of payments made by members towards provisions which they wish to secure.
7. *By the Chairman:* What is the whole amount of the assurances? Close upon £320,000, upon lives. The annuities at present payable are very small—only about £120 a year; but the deferred annuities, in course of purchase, are to the extent of about £1,200.
8. What is the average sum of the assurances? Within about £10 more than £500.
9. Is there any limit, by the present Rules of the Society, to the amount of the assurances? There is no limit by the Rules, but the Directors have, for the present, laid down a limit of £2,000 on one life.
10. Can you explain to the Committee the reasons why the members of the Society wish to be incorporated? I believe among the leading reasons are, the difficulty of acting under so many Acts as now exist, and the difficulty of doing the business we are now doing under the restrictions required even by the present Acts.
11. You are alluding to the Friendly Societies' Acts? Yes. I believe there are inconsistencies in the various Acts, which render it exceedingly difficult for the Society to strike out a middle course, so as not to deviate from the law. The extent of the business now done by the Society renders it exceedingly difficult to carry it on under these Acts, and we require new rules, adapted to the business we do, and to enable us to do business in other Colonies, and in Europe, which would require to be enrolled under the new Act, and that Act would limit us to policies of assurance of £100, and so on.
12. That is the 17th Victoria, No. 26? Yes.
13. If you are obliged to come under the present Friendly Societies' Act with these limitations as to assurances and annuities, it would destroy the business of the Society? Absolutely.
14. Who are the Directors for the present year? Mr. M. E. Murnin (Chairman), Mr. Frederick Ebsworth (Deputy Chairman), Major Christie, Dr. Mitchell, Mr. Holroyd, and Mr. Fairfax.
15. *By Mr. Macarthur:* Is there any money employed for the purpose of obtaining endowments—I see it is one of the purposes specified—"purchasing and granting endowments"—is any fund applied in that way? We have a considerable amount of endowment business. It is necessarily the smallest branch, in point of income, of any of them, from the nature of the business.
16. Will you state what is the amount of that business? I should say about £5,000 of endowments are in course of purchase.
17. *By the Chairman:* How have you invested the funds up to the present time? In the greatest measure on mortgage of freehold securities.
18. What is the amount of investment? At the present moment about £20,000.
19. *By Mr. Cox:* Have you made any investments in Government securities? We have, from time to time, for temporary purposes.
20. No permanent investment? We have not done so, at present. The mode of investment will be seen in the table at the end of the Rules. It enables us to get a higher rate of interest than we would get on Government securities, and to invest in a different way, and more advantageous to the Society.
21. *By Mr. Sandeman:* Do you employ any of your funds in underwriting? Not at all.
22. *By the Chairman:* Could you give a short abstract of the state of the funds of the Society at the present moment? About £14,000, or perhaps more, are invested on mortgage of city and suburban properties; there are about £1,500 invested in loans to members on security of their policies; a small sum, of about £1,000 perhaps, on country properties; and a considerable balance in the Bank at the present time—more than £3,000.
23. How many members are there? About eight hundred or eight hundred and fifty existing members.

R. Thompson,  
Esq.

9 Jan., 1857.



1856.

NEW SOUTH WALES.

*Legislative Assembly.*

AUSTRALIAN TRUST COMPANY'S BILL.

# REPORT

FROM

THE SELECT COMMITTEE

ON THE

## AUSTRALIAN TRUST COMPANY'S BILL;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE

AND

MINUTES OF EVIDENCE.

---

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,  
18 November, 1856.

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1856.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE  
LEGISLATIVE ASSEMBLY.

---

VOTES No. 26. SATURDAY, 20 SEPTEMBER, 1856.

8. Australian Trust Company's Bill :—Mr. Barker moved, pursuant to notice,—
- (1.) That the Australian Trust Company's Bill be referred for the consideration and report of a Select Committee.
- (2.) That such Committee consist of Mr. Nichols, Mr. Jones, Mr. Gordon, Mr. Hargrave, Mr. Hay, Mr. Osborne, and the Mover.
- Question—(1.) That the Australian Trust Company's Bill be referred for the consideration and report of a Select Committee—put and passed.
- Question—(2.) That such Committee consist of Mr. Nichols, Mr. Jones, Mr. Gordon, Mr. Hargrave, \*Mr. Hay, Mr. Osborne, and the Mover—put and passed.

\* Seat declared vacant 3 October, 1856.

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VOTES No. 45. TUESDAY, 18 NOVEMBER, 1856.

12. Australian Trust Company's Bill :—
- (1.) Mr. Barker, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before the Select Committee for whose consideration and Report this Bill was referred, on the 20th September last.
- Ordered to be printed.
- (2.) Mr. Barker then moved, That the second reading of this Bill stand an Order of the Day for this day week.
- Question put and passed.
- 

REPORT



1856.

NEW SOUTH WALES.

Legislative Assembly.

AUSTRALIAN TRUST COMPANY'S BILL.

## REPORT

FROM

THE SELECT COMMITTEE

ON THE

## AUSTRALIAN TRUST COMPANY'S BILL.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and Report was referred, on the 20th September last, the "*Australian Trust Company's Bill*," beg leave to Report to your Honorable House—

That they examined Mr. William Barker, the Solicitor for the Bill, (whose Evidence will be found appended hereto,) and that the Preamble having been satisfactorily proved by the evidence of that gentleman, they proceeded with the clauses of the Bill, in neither of which did they find it necessary to make any amendment; and your Committee now beg to lay before your Honorable House the said Bill, *with a verbal amendment in the Preamble.*

THOS. BARKER,

*Chairman.*

*Legislative Assembly Chamber,  
Sydney, 18 November, 1856.*

PROCEEDINGS OF THE COMMITTEE.

TUESDAY, 11 NOVEMBER, 1856.

Members Present:—

Mr. Barker,		Mr. Gordon,
Mr. Hargrave,		Mr. Jones.

Mr. Barker was called to the Chair.

*Mr. Andrew Bonar*, Chairman of the Company's Local Board of Directors, present for the Company.

The Chairman stated the object of the Company in seeking for the introduction of this Bill.

*Mr. William Barker*, Solicitor for the Bill, examined.

At the request of the Solicitor for the Bill, the Preamble was amended by the omission of all the words after the words "*Be it therefore enacted by,*" in the 12th line of page 3 of the Bill, to the end of the Preamble, and by the insertion in their place of the words "*The Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales, in this present Parliament assembled, as follows:—*"

Motion made and Question—"That the Preamble, as verbally amended, stand part of the Bill"—*agreed to.*

Clauses I. and II. of the Bill were then read by the Chairman, and agreed to without amendment.

Committee agreed to Report the Bill, so amended in the Preamble.

WITNESS.

PAGE.

Mr. William Barker..... 1

MINUTES

1856.

NEW SOUTH WALES.

## MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

## AUSTRALIAN TRUST COMPANY'S BILL.

TUESDAY, 11 NOVEMBER, 1856.

Present:—

MR. BARKER,  
MR. GORDON,MR. JONES,  
MR. HARGRAVE.

THOMAS BARKER, Esq., IN THE CHAIR.

William Barker, Esq., appeared as Solicitor for the Bill, and was examined as follows:—

1. *By the Chairman:* Will you explain the object of this Bill? By the Charter or Letters Patent mentioned in the Preamble, of which I produce an exemplification under the Great Seal, the Australian Trust Company was established and incorporated for the purpose of lending and advancing money, upon the security of lands in the Australian Colonies; and they are authorized to take, hold, sell, and dispose of all such lands in the Colonies as might be conveyed to the Company, or any Trustee for them, by way of mortgage, or on any trusts for sale, or otherwise, in the way of security for advances made by the Company; and also to purchase and hold other lands in the said Colonies, and in the United Kingdom; provided the value of the lands purchased in the Colonies, and in Great Britain and Ireland, were not respectively of more than the value of £1,000 per annum, at the time of purchase. It is also declared by the Charter, that the Company shall not take a conveyance of any lands, except by way of mortgage, or upon trusts for sale, or otherwise than as security for moneys advanced; and that if on default of payment of the money so secured, or otherwise in due course of law, the Company, or its agents, shall enter into possession or receipt of the rents and profits of any lands so mortgaged, and shall not within a year after such enter into possession, sell and dispose of such lands, then the Governor of the Colony for the time being is authorized to require them to sell the lands. The object of this clause was, I presume, to prevent the Company from becoming a land-jobbing Company. There has never been, nor is there now, any desire on the part of the Company to depart from the objects for which they were established and incorporated; and whilst this restriction upon their holding lands for a longer period than a year is thought to be unnecessary for the interests of the public, it has been ascertained that a strict compliance with the Charter in disposing of the lands within a year after taking possession, would be very injurious to the interests of the Company, and of their several mortgagors. The Company never enter into possession of the mortgaged lands until they find that the default of the mortgagor is so great that the interests of the Company require them to take the property into their own hands; but having entered into possession, they give the mortgagor every facility to redeem, and I believe they never sell where the rents keep down the interest. Upon payment of the principal, interest, and expenses, they re-convey to the mortgagor; or if he is unable to redeem, but can make an advantageous sale, they allow him to do so; but if they are compelled to comply with the provisions of the Charter, they must sell, without regard to the state of the market, and without regard to the interests of the mortgagor, or of the Company; and had they done so in times past, many persons who had mortgaged would have been ruined, and the Company would have sustained a very heavy loss. The object of this Bill is to place the Company in the same position as private mortgagees, by enabling them to hold lands, of which they may enter into possession, under a mortgage, until they think it expedient for their own interest, and

Wm. Barker,  
Esq.  
11 Nov., 1856.

Wm. Barker, and the interest of the mortgagor, to sell. Of course, as long as the Company remains in possession, the mortgagor's right to come in and pay off the debt upon his property exists. A difficulty has arisen, under the Charter, in another shape. It often happens that where a mortgagor finds he has no hope of redeeming his mortgage, he desires to put an end to his liability by absolutely releasing his estate to the Company, but the Company are prohibited from holding lands otherwise than as mortgagees, so that if they take the release they cannot hold the lands, and may be compelled to sell at any sacrifice. The same objection applies to a suit for foreclosure. This difficulty it is proposed to remove, by enabling the Company to hold lands, as I have already stated, until they deem it expedient to sell. The rights of the mortgagor are in no way affected, except as they are benefited by the Company not being forced to sell at a sacrifice. I should mention, that an application was made, on behalf of the Company, to the Secretary of State for the Colonies, for a Supplemental Charter, which would give them all the advantages sought by this Act; but the Duke of Newcastle was of opinion that it ought not to be granted, without the assent of the local authorities in the Colonies in which the Company conducted its operations; and the Company were advised to apply to the local Legislature for an Act. The second clause is intended to remove another difficulty, which more affects mortgagors and purchasers from the Company than the Company. All the conveyances executed on behalf of the Company, in this Colony, are executed by the Local Board appointed by power of Attorney, under the Corporate Seal, and the question was raised here whether, as the Company was an incorporated body, such conveyances were valid, they not being under the Common Seal of the Company, which is, of course, in England. It was contended, I believe, by the late Mr. Donnelly and others, that Attorneys of a Corporation, although appointed under the Corporate Seal, could not, without the *Corporate Seal*, execute deeds in the name of the Company. On the other hand, the Attorney and Solicitor General of England (in 1843), and Mr. Hodgkin, an eminent conveyancer, were of opinion, that Attorneys duly appointed might, by using any ordinary Seal as the Corporate Seal, with the proper form of execution and attestation, execute deeds on behalf of the Company. In consequence of the doubt which prevailed, as to the validity of the deeds executed here, it has been the practice with parties who become entitled to conveyances or re-conveyances to obtain from the Directors here such a deed as they were able to give, and to send home another deed for execution under Seal in England. In order to prevent the expense and inconvenience to which parties are subjected, the Company consider it right to apply to the Legislature for an Act to remove the doubt; although it has never affected them, the expense attending the second deed having always fallen on the mortgagor or purchaser.

1857.

NEW SOUTH WALES.

*Legislative Assembly.*

RICHMOND BRIDGE COMPANY'S BILL.

**REPORT**

FROM

THE SELECT COMMITTEE

ON THE

RICHMOND BRIDGE COMPANY'S BILL;

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

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*ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,**3 February, 1857.*

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**Sydney:**PRINTED BY WILLIAM HANSON, GOVERNMENT PRINTER,  
PHILLIP-STREET.

1857.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF  
THE LEGISLATIVE ASSEMBLY.

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VOTES No. 40. SATURDAY, 8 NOVEMBER, 1856.

16. Richmond Bridge Company's Bill :—Mr. Martin moved, pursuant to notice,—
- (1.) That the Bill to Incorporate the Richmond Bridge Company be referred to a Select Committee.
- (2.) That such Committee consist of the following Members :—Mr. Arnold, Mr. Flood, Mr. Forster, Mr. Marks, Mr. Osborne, Mr. Piddington, Mr. Thomas G. Rusden, Mr. Parkes, and the Mover.
- Question—(1.) That the Bill to Incorporate the Richmond Bridge Company be referred to a Select Committee,—put and passed.
- Question—(2.) That such Committee consist of the following Members :—Mr. Arnold, Mr. Flood, Mr. Forster, Mr. Marks, Mr. Osborne, Mr. Piddington, Mr. Thomas G. Rusden, \*Mr. Parkes, and the Mover,—put and passed.

---

VOTES No. 51. FRIDAY, 28 NOVEMBER, 1856.

14. Richmond Bridge Company's Bill :—Mr. Wilshire moved, pursuant to notice, That the Petition of G. M. Pitt, presented by him on the 26th instant, praying for inquiry into, and relief for, the loss he will sustain by the Establishment and Incorporation of a Company to be called "The Richmond Bridge Company," be referred to the Richmond Bridge Company's Bill Committee, with Instructions to Report thereon.
- Question put and passed.

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VOTES No. 82. TUESDAY, 3 FEBRUARY, 1857.

- Richmond Bridge Company's Bill :—
- (1.) Mr. Martin, as Chairman, brought up the Report from, and laid upon the Table the Evidence taken before, the Select Committee for whose consideration and Report this Bill was referred on the 8th November last.
- Ordered to be printed.
- (2.) Mr. Martin then moved, That the second reading of this Bill stand an Order of the Day for this day week.
- Question put and passed.

1857.

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 RICHMOND BRIDGE COMPANY'S BILL.
 

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 REPORT
 

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THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 8th November last, the "*Richmond Bridge Company's Bill*," and on the 28th of the same month, the "*Petition of G. M. Pitt, praying for inquiry into, and relief for, the loss he will sustain by the establishment and incorporation of a Company to be called 'The Richmond Bridge Company,'*"—beg leave to report to your Honorable House,—

That they examined the Solicitor for the Bill, the Secretary to the Provisional Committee of the Company, and three other witnesses, whose evidence will be found appended hereto; and that the Preamble of the Bill having been satisfactorily proved by the evidence of those gentlemen, they proceeded with its several clauses and the schedules referred to therein, in the consideration of which they found it necessary to make *several* amendments; and your Committee now beg to lay before your Honorable House the Bill, as amended by them.

With reference to the Petition of G. M. Pitt, also referred for their consideration, your Committee further beg leave to report, that they inserted in the *nineteenth* clause of the Bill a proviso protecting the rights of the Petitioner.

JAMES MARTIN,  
Chairman.

*Legislative Assembly Chamber,*  
*January, 1857.*

## PROCEEDINGS OF THE COMMITTEE.

WEDNESDAY, 10 DECEMBER, 1856.

**Members Present:—**

Mr. Flood,		Mr. Piddington,
Mr. T. G. Rusden,		Mr. Parkes,
	Mr. Arnold.	

Committee appointed Mr. Martin to be their Chairman.

Mr. Flood, in the absence of Mr. Martin, was called to the Chair.

Solicitor for the Bill, Mr. *R. P. Abbott*.

Resolution of the House, referring to the Committee, on 28 *ultimo*, Petition from Mr. *G. M. Pitt*, against the Bill, read.

Petition then read.

Mr. *R. P. Abbott*, Solicitor, Mr. *George Bowman*, and Mr. *Joseph Cope*, severally examined

[Adjourned till to-morrow, at Twelve o'clock.]

THURSDAY, 11 DECEMBER, 1856.

By direction of the Chairman, the Meeting of the Committee, to be holden *this day*, was postponed until *to-morrow*, at Ten o'clock.

FRIDAY, 12 DECEMBER, 1856.

**Members Present:—**

Mr. Flood,		Mr. Piddington,
Mr. Forster,		Mr. T. G. Rusden,
	Mr Marks.	

Mr. Flood, in the absence of the Chairman, was called to the Chair.

Mr. *D. McBeath* and Mr. *Alexander Fraser*, Secretary to the Provisional Committee of the Company, examined.

Committee deliberated as to the expediency of summoning Mr. *G. M. Pitt*, the Petitioner against the Bill, to be heard at their next Meeting.

Motion made, and *Question*—"That Mr. *G. M. Pitt* be summoned before this Committee as a witness, on Wednesday next"—*agreed to*.

[Adjourned till Wednesday next, at half-past Ten o'clock.]

WEDNESDAY, 17 DECEMBER, 1856.

**Members Present:—**

Mr. Flood,		Mr. Forster.
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Mr. *G. M. Pitt*, Petitioner against the Bill, was in attendance as a witness, but a Quorum of the Committee not being present,

[Adjourned till Friday next, at Twelve o'clock.]

FRIDAY, 19 DECEMBER, 1856.

**Members Present:—**

James Martin, Esquire, in the Chair.

Mr. Piddington,		Mr. Forster,
Mr. Flood,		Mr. T. G. Rusden.

Committee deliberated as to whether it was absolutely necessary to examine Mr. *G. M. Pitt*, the Petitioner against the Bill, and considered that his examination would be rendered unnecessary in the event of their inserting a Proviso in the *Nineteenth* Clause, that should he sustain any loss or damage by the execution of the powers thereby conferred, he should be entitled to reasonable compensation for such loss or damage.

Committee proceeded to consider the Preamble of the Bill, and made the following amendments therein:—

Page 1,	Line 1,—after <i>Whereas</i> omit <i>from</i> .
"	Lines 1 and 2,—after <i>population</i> omit <i>within the last few years</i> .
"	Line 3,—after <i>Cook</i> insert <i>and the extension of</i> .
"	" —omit <i>at the Richmond Ferry</i> .
"	" —after <i>Hawkesbury</i> omit all the words to the word <i>Incorporation</i> (inclusive) in line 22, and insert <i>have rendered the erection of a Bridge at or near the site of the present Ferry, at North Richmond, desirable</i> .
Page 1,	Line 24,—omit <i>this present</i> .
"	" —after <i>assembled</i> insert <i>and by the authority of the same</i> .
"	" 25,—omit all the words after the word <i>follows</i> .

[Clause 1 of the Bill to commence after *this word*.]

Whereupon



Whereupon, Committee being of opinion that the evidence of the witnesses shewed that the matters required by the Standing Orders had been complied with, and the allegations contained in the Preamble proved,—

Motion made, and Question—"That this Preamble, as amended, stand part of the "Bill"—*agreed to.*

Committee then proceeded to consider the several Clauses of the Bill, and made the following amendments therein:—

Omit the word *That* at the commencement of every Clause throughout the Bill, wherein such words occurs.

- Clause 1, commencing after word *follows*, Page 1, Line 25.
- " Page 2, Line 8,—substitute *six* for *one*.
- " " " —after *feet* add *at the place hereinafter mentioned*.
- " " " 15,—after *plead* and insert *be*.
- " " " 16,—after *courts* add *and places*.
- " 2, " 3, " 5,—after *and* insert *shall*.
- " " " 6,—after *the* insert *said*.
- " " " 8,—substitute *and* for *or*.
- " " " —after *such* call insert *shall*.
- " " " 18,—omit *That*.
- " " " 19,—after *transferable* insert *and transmissible*—omit *That*.
- " 3, agreed to without amendment.
- " 4, Page 4, Line 12,—after *conveyance* insert *and*.
- " " " 17,—after *be* insert *so*.
- " " " 18,—after *Officers* insert *as*.
- " 5, " " 23,—after *share* insert *in the said Company*.
- " 6, " 5; " 1,—after *Company* insert *or to such other person as the Directors shall authorise to receive the same*.
- Clause 7, Page 5, Line 4,—after *see* insert *to*.
- " " " 7,—after *share* insert *shall*.
- " " " 10,—after *the* insert *said*.
- " 8, agreed to without amendment.
- " 9, Page 6, Line 2,—after the word *respect* substitute *of* for *to*.
- " " " 3,—after *Company* insert *or other person appointed as aforesaid*.
- " " " —after *places* insert *from time to time*.
- " " " —substitute *of the said Company* for *thereof*.
- " 10, Page 6, Line 5,—substitute *to* for *for*.
- " 11, agreed to without amendment.
- " 12, Page 6, Line 14,—omit *who*.
- " 13, agreed to without amendment.
- " 14, Page 6, Line 27.—After *they* add *shall*.
- " 15. " 7 " 7.—After words *limits of* substitute *this* for *the*.
- " 16. " 7 " 19.—Substitute *private* for *public*.
- " " " 27.—Substitute *the* for *such*.
- " 17. " 8 " 5.—After *by* insert *the sale of*.
- " " " 5.—After *any* insert *such*.
- " " " 7.—After *time of* insert *such*.
- " 18. Agreed to without amendment.
- " 19. Considered, and postponed.
- " 20. Page 9, Line 12.—Substitute *and* for *that*.
- " 21. " 9 " 18.—Omit *that*.
- " " " 28.—Substitute *and* for *or*.
- " 22. " 10 " 12.—After *idiot* insert *such lunatic or idiot*.
- " " " 15.—Substitute *by* for *in*.
- " 23. " 10 " 16.—After *the* insert *said*.
- " " " 23.—After *more of the* insert *said*.
- " " " 2.—Substitute *at* for *or*.
- " " " 3.—Before *shall* substitute *meetings* for *meeting*.
- " 24. " 11 " 18.—Substitute *have been* for *be*.
- " " " 19.—After *every* insert *such*.
- " " " 27.—After *to* substitute *have been* for *be*.
- " " " 28.—Omit *that*.
- " 25, being an accidental reprint of the foregoing Clause, was struck out.
- " 26. (now 25.) Agreed to without amendment.
- " 27. (now 26.) Page 12, Line 25.—After *special* insert *general*.
- " " " 28.—Substitute *any* for *such*.
- " 28 (now 27.) " 13 " 4.—Omit *Provided always, and be it enacted, That*.
- " " " " 5.—Omit *being*.
- " " " " 7.—After *Contract* insert *with the Company*.
- " " " " 7.—Substitute *time* for *term*.
- " 29 (now 28.) Agreed to without amendment.

[Adjourned till Wednesday, 31st instant, at Twelve o'clock.]

WEDNESDAY, 31 DECEMBER, 1856.

**Members Present :**

James Martin, Esquire, in the Chair.

Mr. Forster.

Mr. Marks.

- Committee proceeded with the further consideration of the Bill, commencing from Clause 30, (now 29,) and made the following amendments therein.
- Clause 30 (now 29.) Page 14, Line 5.—After *days* insert *after such*.  
 " " " " 6.—After *shareholders* insert *aforesaid*.  
 " 31 (now 30.) Agreed to without Amendment.  
 " 32 (now 31.) Page 14, Line 21.—Omit *sixty*.  
 " 33 (now 32.) Agreed to without amendment.  
 " 34 (now 33.) Page 15, Line 21.—Substitute *from* for *for*.  
 " " " " 24.—Substitute *baggage* for *luggage*.  
 " 35 (now 34.) " 15 " 30.—Substitute *powers* for *power*.  
 " 36 (now 35.) " 16 " 9.—After *Company* substitute *and* for *or*.  
 " " " " 9.—After *could* insert *use*.  
 " 37 (now 36.) " 16 " 16.—Substitute *be* for *have been*.  
 " " " " 17.—After *or* at commencement insert *in case*.  
 " " " " 20.—Omit *a*.  
 " " " " 2.—After *any* insert *other*.  
 " 38 (now 37.) " 17 " 15.—Omit *that*.  
 " " " " 25.—After *aforesaid* or insert *to cause the name or names of the said Collector or Keeper of such Tolls for the time being to be put up as aforesaid, or*.  
 Clause 38 (now 37.) " 18 " 5.—After *hinder* insert *or delay*.  
 Clause 39 (now 38.) Agreed to without amendment.  
 " 40 (now 39.) Page 18, Line 18.—After *may omit and shall*.  
 " 41 (now 40.) " 18 " 24.—After *upon the* insert *said*.  
 " " " " 25.—After *cattle* insert *or any*.  
 " " " " 25.—Substitute *horse* for *horses*.  
 " " " " 27.—After *person* omit *or persons*.  
 " 42 (now 41.) Agreed to without amendment.  
 " 43 (now 42.) Page 19, Line 14.—After *as* insert *thereby*.  
 " " " " 18.—After *as the* insert *said*.  
 " 44 (now 43.) " 19 " 25.—After *person* insert *so*.  
 " 45. (now 44.) Page 20, Line 5.—After *is* insert *or are*. After *authorised* insert *and required to proceed to make enquiry touching the matters complained of, and to examine any witness or witnesses who shall be offered on either side on oath, which oath every such Justice is hereby authorised to administer*.  
 Clause 45. (now 44.) Page 20, Line 5.—After *authorised* omit *to adjudicate*.  
 " " " " 7.—After *convict* insert *or acquit*.  
 " 46. (now 45.) " 20 " 18.—After *sums* insert *of money*.  
 " " " " 19.—After *other* insert *moiety*.  
 " 47. (now 46.) " 20 " 23.—After *be* insert *removed or*.  
 " " " " 25.—After *therein* insert *provided that it be therein*.  
 " 48. (now 47.) " 21, " 3.—After *by the* insert *said*.  
 Clauses 49, 50, and 51. (now 48, 49, and 50, respectively,) agreed to without amendment.  
 Clause 52. (now 51.) Page 21, Line 28.—Omit *so*.  
 " " " " 29.—After *entitled to* insert *any*.  
 " " " " 7.—After *extent of* substitute *his* for *the*.  
 " 53. (now 52.) Agreed to without amendment.  
 " 54. (now 53.) Page 22 Line 16.—After *three thousand* insert *pounds*.  
 " " " " 22.—After *each such* insert *contributor or*.  
 " " " " 24.—After *estate and* insert *shall be*.  
 " 55. (now 54.) " 23, " 1.—After *All* at the commencement, insert *the*.  
 " " " " 5.—After *residue* substitute *and* for *or*.  
 " 56. (now 55.) " 23, " 19.—After *omit* or insert *neglect*.  
 " " " " 25.—Omit *be alleged to*.  
 Clause 57. (now 56.) agreed to without amendment.  
 " 58. (now 57.) Page 24, Line 10.—Substitute *seven* for *ten*.  
 " " " " 14.—After *intention* insert *so*.  
 " " " " —After *to do* omit *so*.  
 " " " " 24.—Omit *sixty*.  
 " " " " 1.—After *upon* insert *the*.  
 " 59. (now 58.) " 25 " 5.—Omit *sixty*.  
 " " " " 7.—After *Executive* insert *Council*.  
 " 60. (now 59.) " 25 " 11.—Omit *sixty*.  
 Clauses 61, (now 60) and 61 agreed to without amendment.  
 Committee then deliberated on Clause 19, and further postponed the same.  
 Motion made and *Question*—"That Messieurs A. Frazer and D. Mc. Beath, be again summoned before this Committee, as witnesses, for Tuesday next"—*agreed to*.  
 [Adjourned till Tuesday next, at Twelve o'clock.]

TUESDAY,

TUESDAY, 6 JANUARY, 1857.

**Member Present:—**

Mr. Flood.

Mr. A. Frazer and Mr. D. McBeath, were in attendance as witnesses, but a Quorum of the Committee not being present,  
[Adjourned till Friday, 30 instant, at Twelve o'clock ]

FRIDAY, 30 JANUARY, 1857.

**Members Present:—**

Mr. Forster, | Mr. Flood.  
Mr. Piddington.

Committee proceeded to consider the Schedules attached to the Bill.  
Schedules A and B read, and agreed to without amendment.  
Schedule C, read.

Committee deliberated, and fixed the Tolls to be charged by the Company, under the Schedule.

Schedule then agreed to.

Clause 19, the consideration of which was further postponed at the last Meeting of the Committee, read, and the following amendments made therein:—

Clause 19. Page 8, Line 22.—Substitute *twenty-one* for *twenty-six*.

" " " After *over* insert *that part of*.

" " " After *Hawkesbury* omit all the words to the word *Cook* inclusive in Line 25, and insert *over which the present road from North Richmond to the Ferry would pass, if prolonged in a straight line from the point at which it diverges towards the south to reach the said Ferry*.

Clause 19. Page 8, Line 27.—After *may* insert *in any way*.

" " " 30.—After *every* insert *other*.

" " 9 " 4.—At the end of Clause add, *Provided that no such embankments, ways, or approaches, shall be made, except on public land, without the consent of the owners; and provided also, that if the present Lessee of the Ferry at North Richmond should sustain any pecuniary injury from the exercise by the said Company of the powers hereby conferred on it, he shall be entitled to recover from the said Company adequate compensation for such injury*.

Committee agreed to report the Bill, as amended, to the House.

## LIST of Cattle crossed over the River Hawkesbury, at the crossing place, Richmond:—

1856.	Head.	1856.	Head.
June 2 ..... Mr. Danger .....	200	July 12 ..... Mr. Hoskisson .....	190
" 3 ..... " C. Eather .....	50	" 12 ..... " Moore .....	160
" 3 ..... " York .....	80	" 13 ..... " Eather .....	72
" 3 ..... " Richards .....	80	" 14 ..... " Ridge .....	212
" 5 ..... " York .....	40	" 14 ..... " Cox .....	260
" 5 ..... " Richards .....	40	" 16 ..... " York and Richards...	140
" 7 ..... " York .....	107	" 21 ..... " Eather .....	50
" 7 ..... " Richards .....	107	" 22 ..... " Russell .....	145
" 7 ..... " Peisley and Neale ...	140	" 23 ..... " McIntyre .....	187
" 7 ..... " C. Eather .....	49	" 23 ..... " Frazier .....	60
" 8 ..... " Tooth .....	126	" 23 ..... " Eather .....	50
" 10 ..... " York .....	98	" 23 ..... " Mylacharane .....	150
" 10 ..... " Richards .....	98	" 29 ..... " Eather's Family.....	180
" 13 ..... " Cope .....	142	" 29 ..... " J. Parnell .....	190
" 15 ..... " Hassall .....	140	" 30 ..... " Coberoft .....	170
" 18 ..... " Loder .....	150	" 30 ..... " Bowman .....	125
" 20 ..... " Eather .....	50	" 31 ..... " York and Richards...	186
" 23 ..... " Howe .....	166	Aug. 1 ..... Abourdeen Company.....	190
" 27 ..... " York .....	127	" 3 ..... Mr. T. Parnell .....	140
" 27 ..... " Richards .....	127	" 4 ..... " Wm. Coberoft.....	210
" 27 ..... " Marsden .....	72	" 7 ..... " Eaton .....	160
" 29 ..... " Eather .....	40	" 15 ..... " Crowley .....	142
" 29 ..... " Richards.....	97	" 16 ..... " York and Richards...	182
" 29 ..... " York .....	97	" 18 ..... " Neale and Davies ...	154
July 1 ..... " Richards and York...	80	" 19 ..... " Pearse.....	170
" 1 ..... " Onus .....	110	" 20 ..... " Richards and York...	188
" 1 ..... " Eather .....	50	" 23 ..... " McIntyre .....	105
" 2 ..... A. Company .....	120	" 24 ..... " Lloyd .....	270
" 3 ..... Mr. Wyndom .....	260	" 24 ..... " Eather .....	55
" 8 ..... " Pearse .....	180	" 24 ..... " York and Richards...	146
" 8 ..... " Hand .....	60	" 26 ..... " Rouse .....	120
" 9 ..... " York and Richards...	170	" 28 ..... " Hassall .....	140

August

1856.		Head.	1856.		Head.
Aug. 29	Mr. Cope	105	Oct. 20	York and Richards...	236
" 29	" Christy	150	" 22	" Bowman	97
Sept. 2	" Pearse	180	" 26	" Huxley	145
" 2	" Town	190	" 30	" Neale and Peisley	260
" 7	" Richards and York...	196	" 30	" Hoskisson	200
" 8	" Beckett	100	Nov. 7	" Richards and York...	204
" 8	" Eather	50	" 10	" Richards and York...	272
" 20	" Boston	240	" 12	" Cox	180
" 20	" Christy	150	" 17	" Richards and York...	210
" 23	" Mylacharane	190	" 19	" Peisley	155
" 23	" Laycock	170	" 23	" Mylacharane	190
" 30	" Town	190	" 24	" York and Richards...	174
" 30	" Pitt	120	" 28	" Ryan	147
Oct. 2	" Richards and York...	182	" 30	" Clift	154
" 4	" Town	145	Dec. 4	" Pearse	150
" 16	" McAlpin	160	" 4	" Comerford	122
" 20	" Snell	220			
		TOTAL.....			13,966.

## LIST of Sheep crossed over the Richmond Punt :—

1856.			1856.		
June 2	Mr. Robinson	1,700	Aug. 9	Mr. Russell	1,750
" 2	" Russell	1,680	" 10	" Busby	1,640
" 3	" Denison	1,200	" 10	" Orr	1,800
" 4	" Christy	1,400	" 12	" Josephson	1,100
" 9	" Allison	1,600	" 24	" Callandoon	3,000
" 14	" Richards	500	" 25	" Lloyd	1,800
" 15	A. Company	1,600	" 27	" Richards	600
" 18	Mr. Hamilton	1,200	Sept. 6	" Peisley	1,350
" 22	" Parsons	1,450	" 17	" White	1,850
" 24	" Parsons	1,590	" 20	" Callandoon	2,000
" 24	" Lawler	1,800	" 29	" Lloyd	1,240
" 24	" Dangar	1,540	" 29	" Busby	1,600
" 24	" Richards	500	" 30	" Lunn	1,500
" 26	" Hale	900	Oct. 2	" Dines	1,750
" 27	" Russell	1,700	" 15	" Allison	1,700
July 2	" Jones	1,000	" 21	" Lloyd	1,400
" 2	" Anderson	1,550	" 24	" Busby	1,750
" 3	" Richards	500	" 24	" Christy	1,500
" 10	" Richards	500	Nov. 8	" White	1,720
" 10	" J. Brown	1,850	" 10	" Denison	1,640
" 10	" Loder	970	" 12	" Grant	1,600
" 17	" Richards	650	" 17	" Hamilton	1,200
" 25	" Richards	600	" 17	" Campbell	1,100
" 31	" Richards	555	" 28	" Hamilton	1,250
Aug. 6	" Dangar	1,600	Dec. 3	" White	1,000
" 8	" Bettington	1,200	" 6	" Allison	1,880
" 9	" Bartlett	1,000			
		TOTAL.....			73,055.

## LIST OF WITNESSES.

Wednesday, 10 December, 1856.

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R. P. Abbott, Esq., Solicitor for the Bill .. .. .	1
George Bowman, Esq. .. .. .	2
Mr. J. Cope .. .. .	4

Friday, 12 December, 1856.

Mr. D. McBeath .. .. .	5
Mr. A. Frazer, Secretary to the Provisional Committee of the Company .. .. .	6

1856.

## NEW SOUTH WALES.

Legislative Assembly.

## MINUTES OF EVIDENCE

TAKEN BEFORE

## THE SELECT COMMITTEE

ON THE

## RICHMOND BRIDGE COMPANY'S BILL.

WEDNESDAY, 10 DECEMBER, 1856.

Present:—

Mr. ARNOLD,  
Mr. FLOOD,Mr. PIDDINGTON,  
Mr. T. G. RUSDEN.

EDWARD FLOOD, ESQUIRE, IN THE CHAIR.

Robert Palmer Abbott, Esquire, called in and examined:—

R. P. Abbott,  
Esq.  
10 Dec., 1856.

1. *By the Chairman*: You are Solicitor for this Bill? Yes.
2. You prepared the Bill now before the Committee? Yes, it came from my office.
3. The Bill is intended to incorporate a Company for the purpose of establishing a Bridge over the Hawkesbury at Richmond? Yes.
4. What is the style and title of the Company? The Richmond Bridge Company.
5. What is the amount of capital subscribed? The amount actually subscribed is very nearly £4,500.
6. What is the proposed capital of the Company? £6,000, divided into one thousand two hundred shares of £5 each.
7. How many shares have been taken up? Eight hundred and eighty-four shares have been taken up.
8. Can you inform the Committee whether this is a transcript of the Nepean Bridge Company's Bill? I believe it is, as near as it can be under the circumstances.
9. Can you inform the Committee whether there is any necessity for the construction of a Bridge across the Hawkesbury at the point in question? I propose to produce evidence to that effect, but of my own knowledge I cannot say anything of it, not knowing the locality.
10. *By Mr. Piddington*: You state that eight hundred and eighty-four shares have been taken up—what sum has been paid on those shares? Two shillings and sixpence a share.
11. *By Mr. Arnold*: Is there any provision in the Bill for making compensation to persons whose interests are likely to be affected by this Bill? Except the general reservation of the rights of the Crown and all other parties, I do not see anything.
12. *By the Chairman*: You have no clause to protect private interests? Not specially. I have no doubt such a clause may be inserted, but I believe it is not actually provided for in the Bill, except generally, in the sixty-first clause.
13. *By Mr. Piddington*: Has the object of compensation ever been considered by the gentlemen concerned, or by yourself as Solicitor for the Bill? No, it has not been inserted in the Bill, that is quite evident; but the gentlemen seeking the Bill will have no objection to have a clause of that kind inserted.
14. What reason have you to suppose so, unless they have expressed their opinion on the point? Mr. Bowman, who is one of the principal shareholders, and whom you can examine presently, expresses his willingness to consent to the introduction of such a clause.
15. *By Mr. Arnold*: You have reason to believe the Company will not object to the insertion of a clause providing for compensation to persons whose interests may be affected by this Bill? Yes—that is, any compensation they may be entitled to, to be settled by arbitration.
16. *By the Chairman*: Are you prepared to give the Committee any reasons why a Company formed for such a purpose as the Richmond Bridge Company, and for a limited period, should

- R. P. Abbott, Esq.  
10 Dec., 1856.
- should be a corporation having perpetual succession and a common seal? I cannot see how perpetual succession can be required when the Act is only asked for, for a limited period.
17. What is the period? A term of sixty years; the Government having the right of purchasing at any time at the end of ten years from the completion of the Bridge.
18. In your judgment, has the Parliament of this Colony any power to create a corporation having perpetual succession and a common seal—must it not emanate from the Crown? It is my opinion that the Parliament has the power, in granting such a Bill, to incorporate the Company in that way.
19. The present, as well as the late Legislature, have given similar powers to other Companies? The late Legislature has done so, and I apprehend the present has the same powers.
20. What is the responsibility of the shareholders according to this Bill? It is limited to the amount of their subscriptions.
21. They will not be liable for any debts, dues, or demands, above the amount of the intended capital? I believe there is a clause in the Bill to the effect that the shareholders will only be liable to the amount of the sum subscribed.
22. Would it not be more satisfactory, as far as the public are concerned, if the shareholders were liable to double the amount of their shares? I think your question will be met entirely by the 54th clause, which gives power to raise £3,000 more capital, in case the £6,000 now proposed should not be sufficient to pay the expense.
23. *By Mr. Piddington*: As I understand that clause it merely provides for increasing the capital of the Company—it does not make the shareholders liable for anything more than the capital subscribed? We will be able to prove that £6,000 will be sufficient to build the Bridge, and when it is built no further expense is expected to be incurred.
24. Then there is no provision in the Bill for increasing the liability of the shareholders beyond the amount of the shares subscribed for? No.
25. *By Mr. Rusden*: The fifty-second clause says that execution against shareholders shall be to the extent of the unpaid shares only? Yes.
26. *By the Chairman*: Do you not think the public would have more confidence in the Company if the liabilities of the shareholders were extended to double the amount of their shares? I think it is unnecessary.

George Bowman, Esquire, called in and examined:—

- G. Bowman, Esq.  
10 Dec., 1856.
1. *By the Chairman*: You are one of the gentlemen named in this Bill, called the Richmond Bridge Company's Bill? I am.
2. You are one of the shareholders of the Company? Yes.
3. Can you state to the Committee any facts to shew the necessity of a Bridge across the Hawkesbury at Richmond? There is a large amount of traffic by sheep, cattle, horses, and teams of every description crossing and re-crossing the river, and, at present, there is only a small punt; cattle cannot cross in it, only sheep, carts, and saddle horses; and if there is any fresh in the river traffic of every description is impeded for several days. I have known it to be stopped for three weeks, during which time, no one could cross; at other times the obstruction has lasted four or five days; it depends upon the quantity of rain that falls, and the rise in the river.
4. Can you give the Committee any idea of the amount of traffic of the several kinds? I can only give you an approximation; but a person will be before you who can tell you very distinctly what the traffic is. During the last six months, from June to the first of December, about fourteen thousand head of cattle crossed the river; but those are not all the cattle that would come if there was a Bridge—they go to other fords; the number I have given you crossed at the Richmond ford. During the same time upwards of seventy-three thousand sheep crossed the river; these also go other roads where the means of crossing are more convenient.
5. Can you inform the Committee how many cattle paid dues at the punt, and how many sheep? All the sheep, but no cattle.
6. What amount is charged per score for sheep? I think it is ten-pence; and for a saddle horse, six-pence; and a gig, a shilling, I think.
7. Is it your opinion that the capital is increasing, and likely to increase? I think it is. There is a road from thence to Bathurst commonly called Bell's line of road, which we trust will be permanently improved, and made use of; it would be a very good line if made, and I think it is likely to be the line of railway when it goes in that direction.
8. How much has the traffic increased in the last twelve months? That is a question I could not answer. It increases gradually every year. Stock from Bathurst and from the Hunter come by that line of road. It is on the direct line from the Hunter, and from Hartley and Bowenfels. It is commonly called Bell's line from the western country, and the Bulga Road from the northern country.
9. Do any wool teams come that way? No.
10. What teams cross there? The farmers' teams. There is a large agricultural population on the other side of the river. The punt is very small.
11. *By Mr. Piddington*: Are you aware whether it is capable of taking a dray with eight bullocks? I do not think it is. I do not think there is such a thing in the district as a dray with eight bullocks. They are all small settlers, and they generally have horse teams. They would have to unyoke the bullocks if they did take it. It is not near so large as the Penrith punt was. Until within the last five years we never used to trouble the punt at all, but now the floods have altered the bed of the river.
12. *By the Chairman*: Is the access to the punt easy, or are the banks steep? They have been cut down and made accessible, and indeed very good. Since the Road Trust has been in existence at Richmond they have kept the road in repair on both sides of the river.

13. Do you consider the charge at the punt light or heavy on those who travel that road with stock? We do not consider it heavy. G. Bowman,  
Esq.
14. Do you think it would tend to the public convenience if a Bridge were erected as contemplated by this Bill? I do. It would be the means of allowing the settlers on the opposite side of the river to bring their produce to market much easier than they do now. A man may wait two or three hours before he can get his turn with the punt, especially if there is a flock of sheep there before him. They take it in turn. 10 Dec., 1856.
15. And, in addition, a Bridge would be a much safer mode of crossing the river? Yes. The present punt is likely to be swamped sometimes. Cattle cannot cross in it at all, and are frequently lost in swimming the river.
16. Is it likely that wool teams would come that way from Bathurst, or the northern country, if this Bridge were built? I think most of the wool teams would come that way if the road were made, but the road must first be made before they could come.
17. Then you are of opinion that the construction of this Bridge would remove many impediments to the movements of the inhabitants generally? A great many; and it would be the means of extending the population on the other side of the river. There is some very good land under the Blue Mountains, on the other side of the river, which would be cultivated if the means of access were more convenient.
18. What are the expectations of the Company in building this Bridge? The expectations of the Company are that they will accommodate the public with a better mode of conveyance across the river than they have at present, and that it will yield them a reasonable profit on the money laid out.
19. What per centage would you call a reasonable profit? Something like eight or nine per cent.
20. How do you arrive at that rate of interest? We judge from the number of cattle and sheep that travel that road, and the number of horsemen and carts that cross and re-cross.
21. Do you not expect to have a right to all the tolls collected there? Yes; it is from the tolls we expect to get that return. We think they will give the shareholders a fair and reasonable interest for their money.
22. For how long do you expect to have the exclusive right to all the tolls? Sixty years, we think, will compensate us for the great outlay.
23. What is the estimated cost of the Bridge? As far as the present estimates have gone, about £6,000; but according to my own opinion, it will be something more. We may also have to purchase the land on each side of the river.
24. How have you arrived at the conclusion, that the Bridge will cost £6,000? From the estimate of Mr. McBeath, who has been engaged in building the Penrith Bridge.
25. Has he submitted plans, and so on? He has.
26. Have you made any estimate of the annual cost of keeping the Bridge in repair? I think Mr. McBeath has.
27. What are the liabilities of the shareholders? The liabilities are intended to be limited to the amount of the subscribed capital.
28. Do you know whether that is the liability of the Penrith Bridge Company? I think this is similar to the Penrith Bridge Company's Bill, only changed to suit the circumstances of the locality. The Secretary who prepared the Penrith Bridge Company's papers prepared our documents in the same way.
29. Is not the land at each side, where you propose constructing the Bridge, public land? There are public roads on each side of the river, but not exactly opposite each other—one is about two or three chains lower down than the other.
30. Then on one side you will make use of the public road, but on the other you expect to have to purchase the land? Yes. We had two clauses introduced into our Bill the other day giving us power to purchase.
31. *By Mr. Piddington*: I think you stated that cattle do not now cross by the punt—do you anticipate that the cattle which now pass by the fords will pass by the Bridge? Yes.
32. They now pass without paying? Yes; but the present lessee has endeavoured to make people pay for swimming cattle across.
33. What reason have you to suppose that if the proposed Bridge is erected they will cross by that, if they have to pay, which, of course, they will have to do? We will occupy the place at which they now cross, and we hope the Act will give us power to prevent them crossing except by the Bridge, and to enclose the road at each end of the Bridge. If they crossed elsewhere, they would be trespassing on the lands of the inhabitants.
34. All the advantages to be expected by the public from this Bridge will depend on the rates of tolls? Yes, and the convenience of getting across the river without delay.
35. I think you stated that, as one of the shareholders, and a large one, perhaps, you were willing to be satisfied with a profit at the rate of eight or nine per cent.? Yes.
36. Would you object to any clause in the Bill fixing the maximum of net profit at eight or nine per cent.? Yes; but I do not think it is possible that you could do it. Supposing the traffic should increase two or threefold, should we not benefit by that. I do not think we should be tied down in that way. The Penrith Bridge Company ran the risk of a greater or less profit, and I think we should do the same. We run the risk of getting no profit at all, and also of the Bridge being washed away. Seeing the great advantage the Penrith Bridge is to the public, we wish to possess the same advantage at Richmond. The shareholders are all interested in the construction of the Bridge without considering the question of profit.
37. *By the Chairman*: Are the rates of tolls charged by the Penrith Bridge Company fair, do you think? I think so.
38. In what time do you propose to complete the Bridge and have it ready for traffic? We ask for two years, but we expect to have it done in fifteen or sixteen months.

Mr. J. Cope.

Mr. Joseph Cope called in and examined:—

1. *By the Chairman:* What are you? A farmer and grazier.
- 10 Dec., 1856. 2. The Committee have been informed that you have taken some pains to ascertain the amount of traffic at the punt at North Richmond? I have. The lessee of course is not disposed to give much information; but from all I can ascertain, and I think it is pretty nearly correct, the average amount of stock that crossed at Richmond, in the years 1855 and 1856, would be about thirty thousand head of cattle, and a hundred and fifty thousand sheep, in each year.
3. Will you inform the Committee what amount, if any, is paid for crossing cattle? Nothing is paid for crossing cattle, because there is no accommodation for them at the ferry.
4. What amount is charged on sheep? Ten pence a score, I think. Here is a statement of the numbers of stock that have actually passed over the river since the beginning of June last, that is for the last six or seven months. (*The witness handed in the same.*) That was prepared by a party on the spot who proposes becoming a shareholder in the proposed Bridge. You will see that rather less stock comes to market in the winter than in the summer time. It includes the worst part of the year I should imagine.
5. It appears by this document, that between the second of June and the fourth of December in this year, 13,966 head of cattle crossed at or near the ferry? Yes.
6. And during the same period 73,055 sheep? Yes.
7. Can you inform the Committee what amount of traffic there is in reference to foot passengers, saddle horses, carriages, and teams? The lessee, or those concerned with him, I believe, admits that the receipts are about £800 a year, but I think they take more money than that. I am pretty confident the receipts must be £1,000 a year; I am in the habit of going there pretty often, and I think whenever I go there I see enough saddle horses, drays, and so on, to make up a considerable moiety of a pound. I think they must receive £2 a day exclusive of the stock transit.
8. Has the traffic increased much during the last year? Not so much during the last year; in point of fact I believe there were a larger number of sheep in 1855 than there will be this year; but it has increased enormously in amount to what it was three or four years since.
9. Do you think your estimate is a reasonable one—thirty thousand head of cattle, and a hundred and fifty thousand sheep in the year? I do.
10. Do you consider that it would be a great advantage to the public if a Bridge were erected at the ford where the ferry is now stationed? I do; and, in saying so, I wish it to be understood that I am not a shareholder, nor do I contemplate becoming one. The present punt is very insufficient for the traffic, and any punt which can be built would not supply all its requirements. For instance, sometimes two or three flocks of sheep come together, and then you see, perhaps, a string of vehicles which have to wait their turn; they may be detained an hour or two. There is always a great deal of confusion when cattle are being attempted to be put across. I think myself that a Bridge is absolutely necessary.
11. And would be a great benefit to the public? No doubt of it. I can also say, from personal observation and research, that a road could be made to Bathurst and Mudgee much better than the one in present use; that is to say, there would be easier gradients to surmount.
12. You think a good road could be made, if there were a Bridge across the Hawkesbury River? The road, of course, could be made without reference to the Bridge. A good drove road exists now, and the chief obstacle to converting it into a good dray road is Douglass's Hill, and that can be avoided, as I can testify from personal observation.
13. I think you stated you had seen a great number of vehicles waiting on the river bank for their turn to cross—how many do you suppose there were at any time? About five or six altogether.
14. Are they delayed there long? They are delayed upwards of an hour. Not long since there was a funeral, and the punt had to make six trips to take the train over. There is much difficulty generally in getting sheep into the punt, and that is a cause of delay.
15. I suppose the sheep are much knocked about and bruised in the endeavour to get them into it? They are. I can speak positively as to that; and so are cattle in trying to make them swim across. As a cattle proprietor myself, I would much rather pay any reasonable toll than knock the cattle about in the way we are obliged to do to get them into the river; the river has deepened of late years, and deepens more and more every day.
16. *By Mr. Piddington:* What distance is the present ferry from the site of the proposed Bridge? The proposed site, as shewn to me the other day, is, I think, about a hundred yards from the ferry.
17. What would you think a moderate rate of toll for cattle passing this proposed Bridge? I would pay two pence a head, rather than have them knocked about—perhaps a little more.
18. You are aware that a petition has been presented against this Bill by the Lessee of the punt? I am, and I wish to bring it under the notice of the Committee, that I think it an unseemly thing that the Lessee of the punt should be also a member of the Richmond Road Trust, which body receives the tolls.
19. It is understood that the lessee of the punt has taken a lease of it for a term of years,—taking that for granted, do you not think he will be very much damaged, personally, by the erection of this Bridge? I do not think he will be injured to any very great extent, because a considerable portion of the term of his lease has gone by, and the Bridge cannot be put up for some time, while the very fact of its being in course of erection would increase the traffic and remunerate the lessee.
20. *By the Chairman:* You do not think a possible injury to the lessee of the punt a question of sufficient importance to stop the erection of the Bridge? Speaking as a private individual, I should think it a hard case if the interest of one individual could stand in the way of the convenience of myself and others.



21. Do you think he would be entitled to compensation? I think he would, if this point were cleared up, whether he can legally hold the Ferry under the circumstances I have just stated. Mr. J. Cope,  
10 Dec., 1856.

22. *By Mr. Piddington:* I think you stated that, in your opinion, the receipts from the Punt are £1,000 a year—are you aware what rental is paid by the lessee? £280.

23. Then he has a profit of about £700 per annum? Yes, minus the expense of working and repairs.

24. *By the Chairman:* Will you look at the table of charges attached to the Penrith Nepean Bridge Company's Act, and inform the Committee whether you consider those charges reasonable and fair, and whether they are such as the inhabitants in the district would be willing to pay, or whether you could suggest any alteration? No one, I think, will object to pay that scale of charges; I should not myself.

FRIDAY, 12 DECEMBER, 1856.

Present:—

MR. FLOOD,	MR. MARKS,
MR. FORSTER,	MR. PIDDINGTON,
MR. T. G. RUSDEN.	

EDWARD FLOOD, ESQUIRE, IN THE CHAIR.

Mr. David M'Beath, called in and examined:—

Mr. D.  
M'Beath.  
12 Dec., 1856.

1. *By the Chairman:* You are the architect employed for the purpose of constructing this Bridge across the Hawkesbury, at Richmond? Yes, I am the engineer.
2. Do you consider it desirable that a Bridge should be constructed at Richmond? I do.
3. Would the public be benefited by such a work being carried into effect? The cross river transit will be greatly facilitated by a Bridge.
4. What mode have they at the present time of crossing the river? By a Punt.
5. Is it suitable for taking in large vehicles, such as wool teams? It is not, and I would inform the Committee that at present there is no mode at all, for the Punt has sunk, and the traffic is, to a certain extent, or I may say entirely, stopped.
6. The public are put to serious inconvenience in consequence? They are.
7. When the Punt is in full operation, is it sufficient to meet all the demands for the purpose of crossing sheep, horses, foot passengers, and small vehicles? It is not. In fact very great delay takes place in consequence of sheep passing. Sometimes parties travelling with their vehicles have to stop nearly the whole day.
8. Are the approaches to the river good? They are not good now.
9. Are they at all dangerous to persons driving gigs or carriages of any description? I think they are.
10. Where do you propose constructing the Bridge? In a direct line with the road on the western bank.
11. Is that a public road? It is a public road.
12. Where will it land on the eastern bank? I think it will land on some land belonging to a Mr. Town.
13. It will not land on public property? It will not. The Committee will understand that the road on the eastern bank is, at least, a hundred yards out of line with the road on the western bank, and therefore it will be necessary to land the Bridge on one side on private property.
14. Are you aware whether the Company has made any arrangements for the purpose of purchasing the property in question? I am not aware of any arrangements having been made, but I understand they are asking powers in their Bill to purchase any land they may require.
15. What kind of bridge do you intend constructing there? An undertruss pile bridge.
16. Is it similar to the Penrith Bridge? It is; I beg to hand in the plan on which it is intended to be built. *(The witness handed in the same.)*
17. Can you construct a bridge of that description, at the point in question, of sufficient stability to resist the flood waters? I can.
18. What will be the cost of the Bridge? Between £6,000 and £7,000. I beg to hand in a detailed estimate. *(The witness handed in the same.)*
19. You think it will not exceed £7,000? It will not.
20. How long do you suppose it will take before the Bridge is completed? I think about eighteen months.
21. So that the public may use it? Yes, I believe we can have it completed in that time.
22. You think sixty years will not be too long a time to allow the Company to keep the Bridge? I think not.
23. Will a wooden bridge last so long as that? I believe this Bridge will be good at the end of a hundred years. I am sure of it, from my knowledge of the durability of ironbark timber, that is, if the platform is kept in order; the framework of the Bridge will be perfectly good.
24. Is timber attacked by the worm in the Hawkesbury River? It is, by the cobra.
25. Is the water salt where you propose to build the Bridge? No, the water is really fresh, but there is an ebb and flow, and I find that to whatever distance the ebb and flow goes, we get this description of worm.

- Mr. D. McBeach.  
12 Dec., 1856.
26. Is the cobra very destructive? Yes.
  27. What plan do you intend to adopt to prevent its ravages? To have the piles sheathed with copper.
  28. Are the piles of the Penrith Bridge sheathed? No, they are not. The ebb and flow does not come within eight miles of Penrith.
  29. *By Mr. Forster*: Is there no other place on the river so suitable as the one you speak of for a bridge? There are certainly places which might be as suitable for a bridge, but not for the road.
  30. This is decidedly the best place for a road and bridge together? Decidedly.
  31. What depth of water at this crossing-place,—is it a deep place? Moderately deep, an average of about seven feet. Some parts of the river are twelve feet deep.
  32. I think you said there is an ebb and flow there? Yes.
  33. What is the depth at low tide? I am speaking of the minimum depth.
  34. What is the width of the river? As near as possible, five hundred feet.
  35. Is there any possibility of constructing an embankment instead of a bridge? None; we require to allow the water to pass off as readily as possible, and with the least obstruction. If we attempted to stop the river, the lower lands would become flooded, what are called the Richmond bottoms. No doubt the river could be dammed.
  36. Is that the only objection you can state to the notion? Of course an embankment could be formed, but it would be more expensive.
  37. Would it be more expensive than a stone bridge? No, I think not.
  38. Considering the matter generally, do you not think embankments could be made to supersede stone bridges? I think they might in many instances, but not in a large river like this. It would be quite possible to construct a dam, but it is quite unnecessary there, for there is always plenty of water. In fact, I believe if we boarded up the upper side of the bridge I built at Penrith, we could make a dam of it; it is quite strong enough.
  39. What will be the length of the platform of your bridge? Nearly six hundred feet.
  40. *By Mr. Forster*: Do you not think that if you built a stone bridge in the first instance, it might ultimately turn out to be the cheapest? It might; but I believe the Company is not in a position to build a stone bridge. It would cost an immense sum of money.
  41. *By the Chairman*: Could you build a stone bridge without piling? Yes, the bottom is very hard.
  42. What is the bottom composed of? It is composed of a very compact gravel, overlaying a clay shale.
  43. *By Mr. Forster*: Supposing there were a Railway running to the westward or northward, is this place likely to be the line of it? Yes, it is the only place where they can get over the mountains.
  44. Is not that another reason why you should build a first rate bridge? We shall build such a structure, that it will be quite able to take anything across it, either a Railway or anything else.
  45. *By Mr. Piddington*: I think you stated that the punt has sunk, and that there are no means of crossing for vehicles now? No, since that time the lessee has sent to Windsor for an old spare punt, for which I understand he is paying £5 a day.
  46. What will be the depth of the piles of this Bridge? Twelve feet in the bed of the river.
  47. *By Mr. Marks*: What sized piles do you propose? Eighteen inches.

Mr. Alexander Fraser called in, and examined:—

Mr. A. Fraser.

- 12 Dec., 1856.
1. *By the Chairman*: What are you? I am Secretary to the Penrith-Nepean Bridge Company, and I also hold the position of Secretary, *pro tem.*, to the contemplated Bridge Company at Richmond.
  2. Do you know the site of the Bridge proposed to be erected? I do.
  3. It is at the crossing-place, where there is a punt now? Yes.
  4. Is that punt suitable for the public requirements? It is not; it is too small, and very dangerous in crossing.
  5. We understand that the public are much inconvenienced by the want of some better means of crossing the river? Yes. On several occasions, perhaps for five or six days together, the traffic is impeded altogether. Cattle and sheep are prevented crossing in ordinary freshes of the river.
  6. Do you think the erection of the contemplated Bridge would be a great public convenience? There is no question about it at all.
  7. Is the traffic sufficiently great to justify the erection of a bridge? No doubt of it. The traffic to the northern districts is increasing daily. An immense number of sheep and cattle are passing.
  8. Can you give the Committee any idea of the quantity of stock that passes in any given time at that crossing-place? I derive my information from parties more conversant with the matter than I am, and they inform me that, during the last twelve months, no less than ninety thousand sheep, forty thousand bullocks, and twelve thousand horses, have crossed the fords and the punt.
  9. From what source did you receive that information? From a variety of graziers and butchers about that neighbourhood, who have watched the stock passing over there. This is merely an approximation, I fancy. You cannot take it as complete data.
  10. Is the punt large enough to take cattle in? Only working bullocks—quiet bullocks.
  11. Do you know the scale of tolls proposed by the Richmond Bridge Company? I will hand in the scale to the Committee. (*The witness handed in the same.*)

12. *By Mr. Piddington* : Are you aware of the present scale of tolls chargeable at the punt? *Mr. A. Fraser.*

Yes. They are as follows :—

Every foot-passenger.....	0s. 2d.	12 Dec., 1856.
Horses (each) .....	0s. 6d.	
Gig with two wheels .....	1s. 0d.	
Waggon (four wheels) .....	1s. 6d.	
Oxen, more than ten .....	0s. 3d.	
not more than ten.....	0s. 4d.	
Sheep, per head .....	0s. 0½d.	

These tolls are chargeable each time the punt is crossed, whereas we only propose to charge once a day, and people may pass as often as they please.

13. What is the projected width of the roadway of the Bridge? Twenty one feet.

14. Is the width of the road approaching the Bridge to be the same? Yes.

15. Where do cattle cross the river now? A short distance below the present ferry.

16. Is the ford very near the proposed line of the Bridge? I should say it is about a quarter of a mile below, towards Windsor.

17. Are you aware that the lessee of the punt has petitioned against this Bill? I have heard so.

18. Have you any knowledge of the terms on which he leases the punt? I am informed that he has it for a term of five years (one of which has expired), and that he pays £283 annually.

19. Do you know whether he has taken it from the Government, or from any local authority? My impression is that he has leased it from the Government. He is one of the Richmond Road Trust: whether that affects his standing, or not, I do not know.

20. If the lessee has taken the punt from the Government for five years, will he not be seriously injured by the erection of the proposed Bridge? Of course, if the Bridge is put in operation, his punt will be of no use whatever, and either the Government or the Company will make him compensation, I should fancy, for any loss he may sustain.

21. You think he will have a title to compensation from some one? I should say so.

22. *By Mr. Rusden* : Will this Bridge when built prevent a person from driving cattle into the river where they now cross? No; they can avail themselves of the ford if they choose, but I do not imagine they will do so. There has been no instance of cattle being taken over the fords at Penrith since the Nepean Bridge has been established. They can drive them over with such facility and ease now, that they never think of taking them by the fords.

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